

SPRING 1970

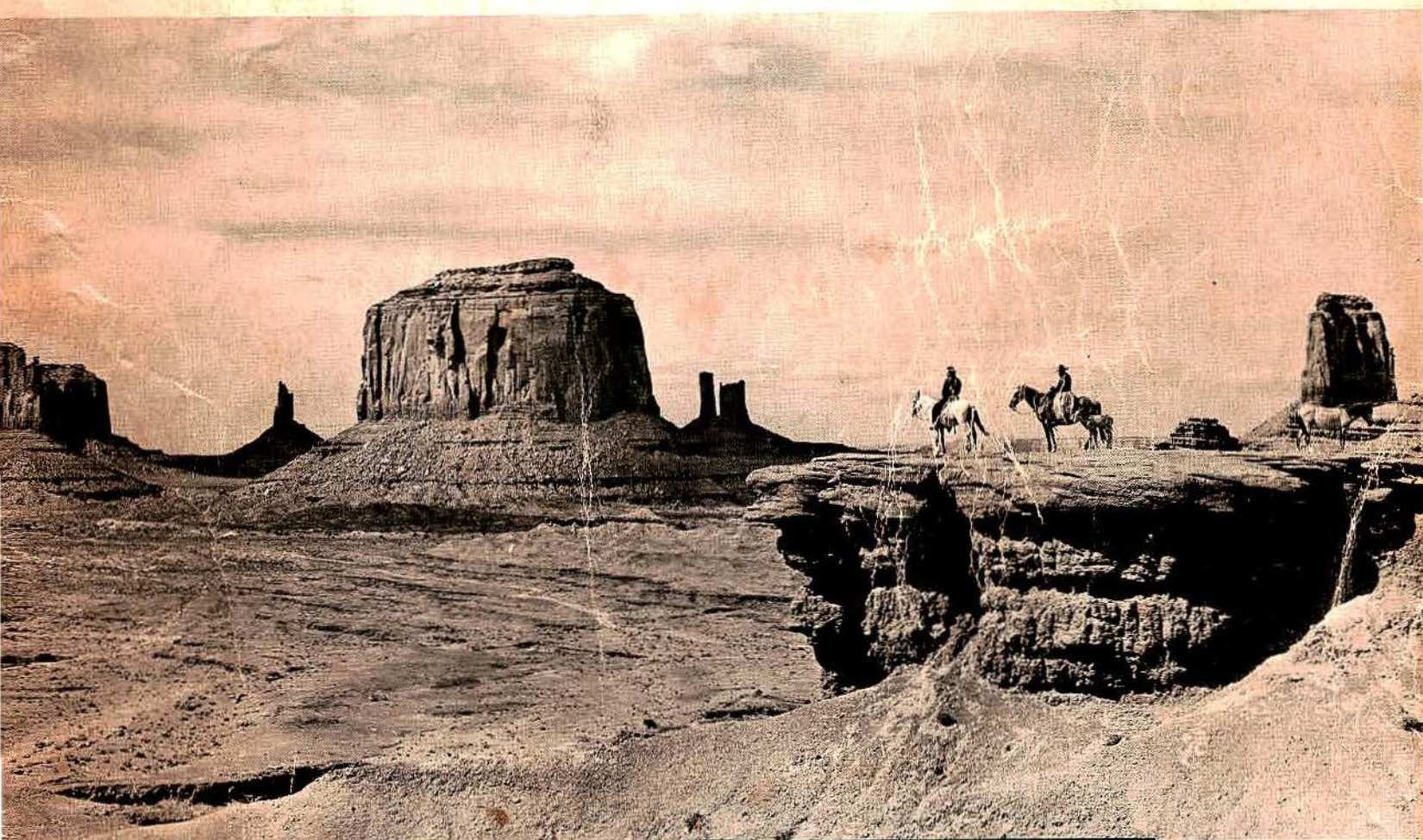
(FOR MARCH, APRIL AND MAY)
Next issue June 1, 1970



radio amateur

callbook

magazine



*Photo courtesy Arizona Department of
Economic Planning & Development*

MONUMENT VALLEY, ARIZONA

Some of the most unusual scenery in the U.S. can be found in Arizona, such as Monument Valley above. The famous "land of room and time enough", in northeastern Arizona, displays nature's talent in the carving of its massive pinnacles, buttes, mesas and arches—a spectacular panorama. This sunny western state is also the land of the Painted Desert and the Petrified Forest. Because of Arizona's wealth of scenic attractions it has become increasingly popular to the tourist and vacationer. But there is more to Arizona than scenery—it is a leader as a source of minerals—producing over half of the nation's copper output.

There are 3,474 licensed radio amateurs in Arizona.

The only publications listing licensed radio amateurs throughout the world.....Since 1920

in this issue

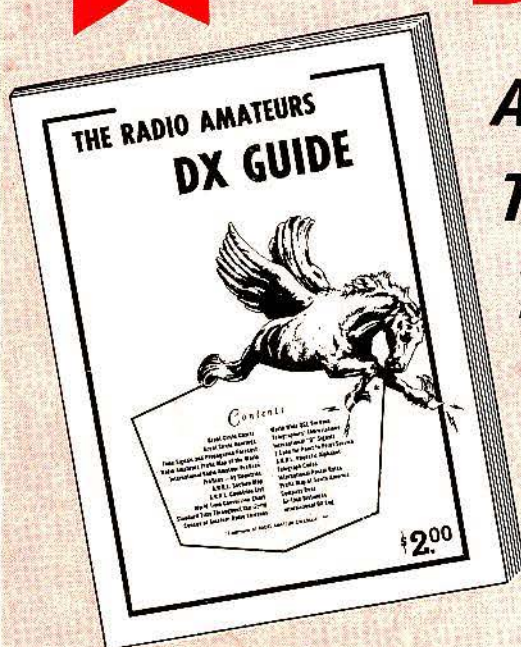
- 287,105 U.S. licensed radio amateurs, including 3,204 new licenses issued by FCC since the Winter 1969-70 issue.
- Over 25,000 changes in listings.
- STOP PRESS—late QTH's.
- CLASS OF LICENSE on each ...
- THEN & NOW—Call letter changes.
- SILENT KEYS deleted from this issue.
- QSL MANAGERS AROUND THE WORLD.
- Radio Amateur prefixes of the world, with map, A.R.R.L. countries list.
- Great circle bearings, postal information, standard time charts, codes, "Q" signals ... and many other features.

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**10th
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RADIO AMATEURS DX GUIDE



**ADD
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YOUR
DXing Pleasure!**

\$2.00

64 pages, size 8 3/4" x 12"

The DX Guide is a handy reference manual containing valuable information for every radio amateur — especially the DXers.

JUST LOOK AT THIS TABLE OF CONTENTS

INTERNATIONAL DX LOG — prefixes of all countries that qualify for DXCC. Ample space provided to make a permanent record of all DX stations worked; showing date, call letters, frequency and whether a QSL card has been sent or received.

WORLD MAP SHOWING RADIO AMATEUR PREFIXES — an outstanding map, 15" x 10".

GREAT CIRCLE MAPS — centered on New York City, San Francisco, Calif., Seattle, Wash., Washington, D.C., and the center of the United States.

GREAT CIRCLE OUTLINE CHART OF THE UNITED STATES — determine the great circle bearing between any two points in the United States with this map.

PREFIX MAP OF SOUTH AMERICA — showing the number or letter designating all sections and countries.

ARRL SECTION MAP — of the U.S., check off the sections you have worked during ARRL contests.

GREAT CIRCLE BEARING TABLES — each printed on a separate page for easy removal of the one nearest your location. 293 bearings are shown to the nearest degree on each table for: Atlanta, Ga., Boston, Mass., Buffalo, N.Y., Chicago, Ill., Columbus, Ohio, Denver, Colo., Detroit, Mich., Houston, Texas, Jacksonville, Fla., Kansas City, Mo., Knoxville, Tenn., Los Angeles, Calif., Louisville, Ky., Miami, Fla., Minneapolis, Minn., New Orleans, La., New York City, Norfolk, Va., San Francisco, Calif., Seattle, Wash., Washington, D.C., and the geographical center of the United States.

GREAT CIRCLE BEARINGS IN THE UNITED STATES — between 39 large cities in the U.S.A., — a valuable aid for VHF work as well as handling traffic through QRM.

GREAT CIRCLE BEARINGS TO WORLD WIDE METROPOLITAN AREAS — exact bearings to the nearest degree from 39

cities in the U.S.A., to 39 metropolitan areas throughout the world.

TIME CONVERSION TABLE — determine the time in any time zone in the world. Also know whether it is today or tomorrow at the place heard or worked.

TIME THROUGHOUT THE WORLD — time zones of most countries. Explains the International Time Zone System.

AIR LINE DISTANCES IN THE UNITED STATES — arranged in alphabetical order between 39 cities of the United States.

POSTAL INFORMATION — rates for QSL cards, first class and airmail letters to foreign countries. Also the number of international reply coupons for the proper postage for a return airmail letter is shown for most countries.

ARRL COUNTRIES LIST — official list of ARRL DX contest and DXCC. Courtesy ARRL.

DX CONTEST AND FIELD DAY LOG — can be used either for a DX contest or the annual ARRL field day.

COMPASS ROSE — for that rotary beam indicator, graduated for 360 degrees. One with white background and no print on the reverse side of the sheet. The other has a black background.

PLUS THESE INTERESTING FEATURES — INTERNATIONAL "Q" SIGNALS; WORLD WIDE QSL BUREAUS; "Z" CODE FOR POINT TO POINT SERVICE; "Q" SIGNALS AND ARRL PHONETIC ALPHABET; TELEGRAPHERS ABBREVIATIONS; DX OPERATING CODE; MORSE CODE.

NATIONAL BUREAU OF STANDARDS PROPAGATION FORECAST SERVICES AND TIME SIGNALS; CENSUS OF RADIO AMATEURS THROUGHOUT THE WORLD; RADIO AMATEUR PREFIXES ALPHABETICALLY BY PREFIX AND BY COUNTRY!

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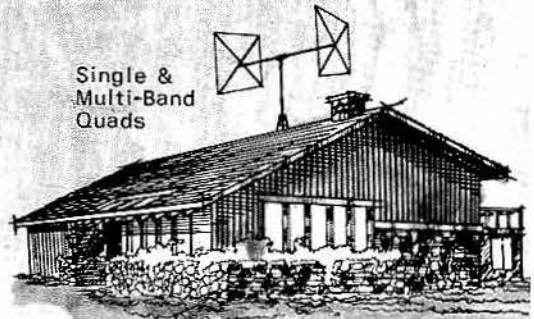
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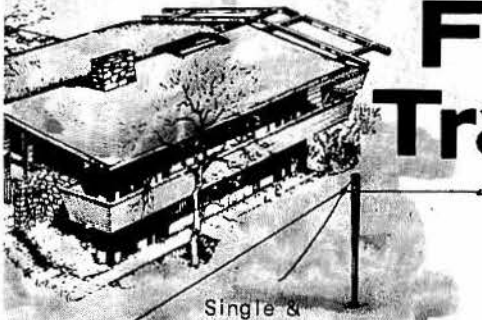
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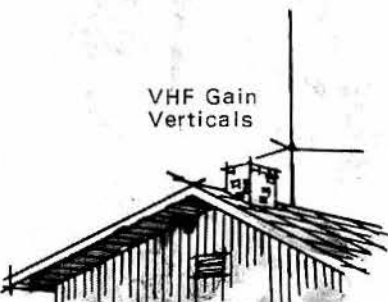
Single & Multi-Band Dipoles



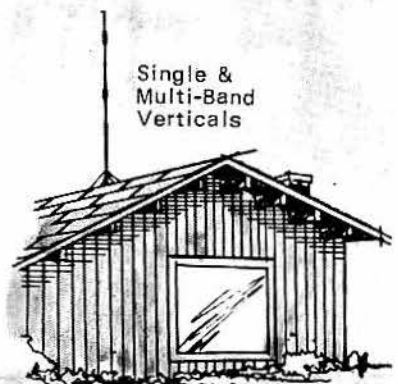
Single & Multi-Band Beams



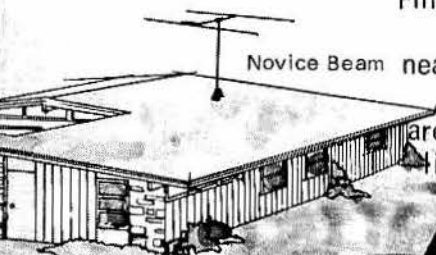
VHF Gain Verticals



Single & Multi-Band Verticals



Novice Beam



Mobile



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callbook

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magazine

RADIO AMATEURS OF THE U. S. A.

VOLUME 48
NUMBER 1

ALL K AND W CALLS

SPRING 1970

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		OTHER CALLS INCLUDING HAWAII AND ALASKA	607

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The Home of RADIO AMATEUR CALLBOOK a modern air-conditioned building planned for maximum efficiency in the production of Callbooks and Callbook products.

A year around staff, through the use of electronic data processing equipment, evaluates and compiles the directory information received daily from all over the world. Extensive library and historical records are maintained to provide the most complete and accurate Callbook possible to produce.

The Callbook had its beginning back in 1920 when there were just a few radio amateurs. Today, Callbooks and Callbook products are in use in every country of the world.

CENSUS OF AMATEUR RADIO LICENSES OF THE WORLD*

Prefix	Country	Number of radio amateur licenses	Prefix	Country	Number of radio amateur licenses	Prefix	Country	Number of radio amateur licenses
A2	Botswana	14	KB6	Baker, Canton, Enderbury, Howland & Phoenix Is.	12	VR1	British Phoenix, Ellice, Gilbert & Ocean Is.	6
AC3	Sikkim	1	KC4	Navassa Is.	1	VR2	Fiji Is.	23
AC4	Tibet	2	KC4AA, US	Antarctica	11	VR3	Line Is.	1
AC5	Butan	2	KC6	Caroline Is.	30	VR4	Solomon Is.	6
AP	Pakistan	36	KG4	Guantanamo Bay, Cuba	17	VR6	Pitcairn Is.	1
BV	Taiwan (Formosa)	1	KG6	Mariana Is.	112	VS5	Brunei	6
CE	Chile	2,258	KG6I	Volcano Is.	4	VS6	Hong Kong	42
CE9	South Shetland Is., Graham Land	26	KH6	Hawaii	1,688	VS9	Aden, Kamaran, Maldives, Socotra Is.	3
CE0A	Easter Is.	4	KJ6	Johnston Is.	6	VU2	India	499
CE0Z	Juan Fernandez Is.	10	KL7	Alaska	1,476	W, K	United States of America (See K, W)	
CM, CO	Cuba	404	KM6	Midway Is.	16	XE, XF	Mexico	2,939
CN	Morocco	147	KP4	Puerto Rico	983	XE1	- 1,430	
CP	Bolivia	579	KP6	Jarvis & Palmyra Is.	7	XE2	- 1,373	
CR3	Portuguese Guinea	3	KR6, 8	Ryukyu Is. (Okinawa)	287	XE3	- 136	
CR4	Cape Verde Is.	29	KS4	Swan Is.	9	XT2	Upper Volta	3
CR5	Sao Tome & Principe Is.	2	KS6	U. S. Samoa	42	XW8	Laos	13
CR6	Angola	262	KV4	Virgin Is.	86	XZ	Burma	31
CR7	Mozambique	220	KW6	Wake Is.	30	YA	Afghanistan	17
CR8	Timor Is.	1	KX6	Marshall Is.	72	YB, YC, YD	Indonesia	57
CR9	Macao	1	KZ5	Canal Zone	172	YK	Syria	10
CT1	Portugal	380	LA	Norway	2,459	YN	Nicaragua	321
CT2	Azores Is.	13	LU	Argentina	14,634	YO	Romania	1,189
CT3	Madeira Is.	12	LX	Luxembourg	91	YS	El Salvador	201
CX	Uruguay	3,140	LZ	Bulgaria	395	YU	Yugoslavia	1,928
C31	Andorra	10	M1	San Marino	4	YV	Venezuela	3,229
DC, DJ, DK, DL	West German Federal Republic	14,933	MP4	Bahrain & Das Is., Muscat & Oman, Qatar, Trucial States	262	ZB2	Gibraltar	20
DM	East German Democratic Republic	2,686	OA	Peru	1,121	ZC4	Cyprus	29
DU	Philippines	147	OD5	Lebanon	79	ZD3	Gambia	2
EA	Spain	1,157	OE	Austria	1,295	ZD5	Swaziland	8
EA6	Balearic Is.	22	OH	Finland	2,149	ZD7	Saint Helena	4
EA8	Canary Is.	142	OH0	Aland Is.	17	ZD8	Ascension Is.	17
EA9	Spanish Sahara, Ifni, Ceuta & Melilla	18	OK, OL	Czechoslovakia	1,438	ZD9	Tristan da Cunha & Gough Is.	2
E1	Ireland	290	ON	Belgium	1,220	ZE	Rhodesia	184
EL, 5L	Liberia	138	OX	Greenland	43	ZF1	Cayman Is.	17
EP	Iran	26	OY	Faeroes Is.	61	ZK1	Cook Is.	9
ET3	Ethiopia	10	OZ	Denmark	2,911	ZK2	Niue Is.	2
F	France	4,651	PA, PE, PI	Netherlands	2,112	ZL	New Zealand	4,307
FB3	Amsterdam, St. Paul, Crozet, Kerguelen, Tromelin Is.	4	PJ	Netherlands Antilles - PJ2 - Curacao	32	ZP	Paraguay	238
FG7	Guadeloupe Is.	31		PJ3 - Aruba	26	ZS	South Africa	2,790
FG8	Comoros	3		PJ4 - Bonaire	3	ZS3	South-West Africa	62
FK8	New Caledonia	25		PJ6 - Saba Is.	1	3A	Monaco	20
FL8	French Somaliland	8		PJ7 - Saint Maarten	5	3V8	Tunisia	5
FM7	Martinique	21	PY	Brazil	10,861	4S7	Ceylon	53
FO8	French Polynesia	44	PY7	Fernando de Noronha Is.	5	4U	United Nations, Geneva & Turin	2
FP8	St. Pierre & Miquelon Is.	5	PY0	Trinidad & Martin Vaz Is.	9	4W1	Yemen	9
FR7	Reunion Is.	19	PZ	Surinam	49	4X4, 4Z4	Israel	590
FS7	Saint Martin	1	SK, SL, SM	Sweden	3,915	5A	Libya	55
FU8, YJ	New Hebrides	6	SP	Poland	2,874	5H3	Tanzania	16
FW8	Wallis & Futuna Is.	1	SU	Egypt	8	5N2	Nigeria	11
FY	French Guiana	14	SV	Greece, Crete	101	5R8	Madagascar	18
G	England	17,349	TF	Iceland	46	5T5	Mauritania	2
GC	Channel Is.	94	TG	Guatemala	264	5U7	Niger	7
GD	Isle of Man	44	TI	Costa Rica	640	5V	Togo	11
GI	Northern Ireland	316	TI9	Cocos Is.	3	5W1	Western Samoa	9
GM	Scotland	1,238	TJ	Cameron	14	5X5	Uganda	2
GW	Wales	773	TL8	Central African Republic	5	5Z4	Kenya	57
HA, HG	Hungary	595	TL8	Republic of Congo (Brazzaville)	8	60	Somali Republic	7
H3	Switzerland	894	TR8	Gabon	11	6V8	Senegal	41
H80	Liechtenstein	3	TT8	Chad	9	6Y5	Jamaica	51
HC	Ecuador	492	TU2	Ivory Coast	48	7G1	Republic of Guinea	2
HCB	Galapagos Is.	7	TY	Dahomey	4	7P8, ZS8	Lesotho	12
HH	Haiti	20	VE	Canada	11,871	7C7	Malawi	16
HI	Dominican Republic	544	VE1	- 1,116		7X	Algeria	26
HK	Colombia	1,945	VE2	- 2,164		7Z, HZ	Saudi Arabia	2
HK0	San Andres & Providencia Is.	20	VE3	- 4,534		8J	Antarctica	2
HM, HL	Korea	163	VE4	- 500		8P6	Barbados Is.	72
HP	Panama	176	VE5	- 536		8R	Guyana	18
HR	Honduras	189	VE6	- 1,102		9G1	Ghana	70
HS	Thailand	72	VE7	- 1,752		9H1	Malta	50
HV	Vatican City	2	VE8	- 111		9I, 9J	Zambia	62
HZ	Saudi Arabia	5	VE0	- 31		9K2	Kuwait	56
I	Italy	3,934	VK	Australia	5,960	9L	Sierra Leone	3
IS	Sardinia	54	V01	Newfoundland	223	9M2	Federation of Malaysia	87
IT	Sicily	175	V02	Labrador	34	9M6	Sabail	3
JA, JH, JR	Japan	12,196	VP1	British Honduras	44	9M8	Sarawak	5
JT1	Mongolia	3	VP2	Leeward-Windward Is.	154	9N1	Nepal	2
JW	Svalbard Is.	10	VP5	Turks & Caicos Is.	15	9Q5	Republic of the Congo (Kinshasa)	231
JX	Jan Mayen Is.	14	VP7	Bahama Is.	57	9U5	Burundi	11
K, W	United States of America (48 states)	281,972	VP8	Falkland, South Georgia, South Orkney, South Sandwich, South Shetland Is.	48	9V1	Singapore	51
KA	U. S. Personnel in Japan	83	VQ8	Bermuda Is.	47	9X5	Rwanda	46
			VQ9	Mauritius & Rodriguez Is.	36	9Y4	Trinidad & Tobago Is.	165
				Seychelles Is.	6			

* From the Spring 1970 Radio Amateur Callbook Magazines.
Absence of prefix and country indicates either that no licenses have been issued or have not been obtainable from official sources.

Alghanistan.....	(A-21).....	YA
Aland Is.....	(E-15).....	OH0
Alaska.....	(NA-1).....	KL7
Albania.....	(E-15).....	ZA
Algeria.....	(AF-33).....	7X
Amsterdam & St. Paul Is.....	(AF-39).....	FB8
Andaman & Nicobar Is.....	(A-26).....	VU5
Andorra.....	(E-14).....	C31
Anzola.....	(AF-36).....	CP6
Antarctica.....	CE9AA-AM, FBBY, KC4AA, KC4US, LA, LU-Z, OR5, VKD, VP8, UA1, ZL5, 3Y, BJ	
Argentina.....	(SA-13).....	LU
Ascens on Is.....	(AF-36).....	ZD8
Austral & French Antarctic.....	(A-39).....	FB8
Australia.....	(O-29 & 30).....	VK
Austria.....	(E-15).....	OE
Azores Is.....	(E-14).....	CT2
Bahama Is.....	(NA-8).....	VP7
Bahrain.....	(A-21).....	MP48
Baker Is.....	(O-31).....	KB6
Balearic Is.....	(E-14).....	E46
Barbados Is.....	(NA-8).....	8P6
Belgium.....	(E-14).....	ON
Bermuda Is.....	(NA-5).....	VP9
Bhutan.....	(A-22).....	AC5
Bolivia.....	(SA-10).....	CP
Botswana.....	(AF-38).....	A2C
Brazil.....	(SA-11).....	PY
British Honduras.....	(NA-7).....	VP1
British Phoenix Is.....	(O-31).....	VR1
Brunei.....	(O-28).....	V55
Bulgaria.....	(E-20).....	LZ
Burma.....	(A-26).....	XZ
Burundi.....	(AF-36).....	9U5
Cambodia.....	(A-26).....	XU
Cameroon.....	(AF-36).....	TJ
Canada.....	(NA-1 to 5).....	VE
Canal Zone.....	(NA-7).....	KZ5
Canary Is.....	(AF-33).....	E48
Canton Is.....	(O-31).....	KB6
Cape Verde Is.....	(AF-35).....	CR4
Caroline Is.....	(O-27).....	KC6
Cayman Is.....	(NA-8).....	ZF1
Central African Republic.....	(AF-36).....	TL8
Ceuta y Melilla, Spanish.....	(A-33).....	LA9
Ceylon.....	(A-22).....	457
Chad.....	(AF-36).....	TT8
Chagos Is.....	(AF-39).....	VQ8
Channel Is.....	(E-14).....	GC
Chatham Is.....	(O-32).....	ZL
Chile.....	(SA-12).....	CE
China.....	(A-23 & 24).....	BY
Christmas Is.....	(O-29).....	VK9
Ciamperton Is.....	(NA-7).....	F08
Cocos Is.....	(NA-7).....	TY
Cocos-Keeling Is.....	(O-29).....	VK9
Colombia.....	(SA-9).....	HK
Comoro Is.....	(AF-39).....	TH8
Congo, Republic of.....	(AF-36).....	TN8
Congo, Republic of the.....	(AF-36).....	9Q5
Cook Is.....	(O-32).....	ZK1
Corsica.....	(E-15).....	FC
Costa Rica.....	(NA-7).....	T1
Crete.....	(E-20).....	SV
Crozet Is.....	(AF-39).....	FB8
Cuba.....	(NA-8).....	CM, CO
Cyprus.....	(A-20).....	ZC4
Czechoslovakia.....	(E-15).....	OK, OL
Dahomey.....	(AF-35).....	TY
Das Is.....	(A-21).....	MP4D
Denmark.....	(E-14).....	OZ
Dodecanese Is.....	(E-20).....	SV5
Dominican Republic.....	(NA-8).....	HI
Easter Is.....	(SA-12).....	CE0A
Ecuador.....	(SA-10).....	HC
Egypt.....	(AF-34).....	SU
El Salvador.....	(NA-7).....	YS
Endersbury Is.....	(O-31).....	KB6
England.....	(E-14).....	G
Ethiopia.....	(AF-37).....	ET3
Faernes Is.....	(E-14).....	OY
Falkland Is.....	(SA-13).....	VP8
Fanning Is.....	(O-31).....	VR3
Fernando de Noronha.....	(SA-11).....	PY7
Fiji Is.....	(O-32).....	VR2
Finland.....	(E-15).....	OH
France.....	(E-14).....	F
French Polynesia.....	(O-32).....	F08
Gabon.....	(AF-36).....	TR8
Galapagos Is.....	(SA-10).....	HC8
Gambia.....	(AF-35).....	ZD3
German Federal Rep, West.....	(E-14)DC, DJ, DK, DL	
German Dem. Rep, East.....	(E-14).....	DM
Ghana.....	(AF-35).....	9C1
Gibraltar.....	(E-14).....	ZB2
Gilbert Is.....	(O-31).....	VR1
Goa.....	(A-22).....	CR8
Graham Land.....	(SA-13).....	VP8
Greece.....	(E-20).....	SV
Greenland.....	(NA-40).....	OX
Guadeloupe Is.....	(NA-8).....	FG7
Guantanamo Bay.....	(NA-8).....	KC4
Guatemala.....	(NA-7).....	TG
Guiana, French.....	(SA-9).....	FY7
Guinea, Equatorial.....	(AF-36).....	3C

Guinea, Portuguese	(AF-35)	CR3
Guinea, Republic of	(AF-35)	7G1
Guyana	(SA-9)	6R
Haiti	(NA-8)	HH
Hawaii	(O-31)	KH6
Heard Is.	(O-39)	VK0
Honduras	(NA-7)	HR
Hong Kong	(A-24)	VS6
Hong Kong Is.	(O-31)	KB6
Hungary	(E-15)	HA, HG
Iceland	(E-40)	TF
India	(AF-33)	EA9
Indonesia	(A-22)	VU
Indonesia	(O-28)	YB, YC, YD
Iran	(A-21)	EP
Iran	(A-21)	EI
Ireland	(E-14)	EI
Isle of Man	(E-14)	GO
Israel	(A-20)	4X4, 4Z4
Italy	(E-15)	I
Ivory Coast	(AF-35)	TU2
Jamaica	(NA-8)	6Y5
Jan. Mayen Is.	(E-40)	JX
Japan	(A-25)	JA, JH, JR
Jarvis Is.	(O-31)	KP6
Johnston Is.	(O-31)	KJ6
Jordan	(A-20)	JY
Juan Fernandez Is.	(SA-12)	CEBZ
Kanaran Is.	(A-21)	VS9K
Kenya	(AF-37)	5Z4
Kermadec Is.	(AF-39)	F88
Kermadec Is.	(O-32)	ZL1
Korea	(A-25)	HM, HL9
Kuwait	(A-21)	9K2
Labrador	(NA-2)	VO2
Laccadive Is.	(A-22)	VU4
Lans	(A-26)	XW8
Lebanon	(A-20)	OD5
Leeward Is. (West Indies)	(NA-8)	VP2
Lesotho	(AF-38)	7P8
Liberia	(AF-35)	EL, 5L
Libya	(AF-34)	5A
Liechtenstein	(E-14)	HB0
Line Is.	(O-31)	VR3
Little America	(SA-13)	KC4
Lord Howe Is.	(O-30)	VK2
Luxembourg	(E-14)	LX
Macao	(A-24)	CR9
Macquarie Is.	(O-30)	VK0
Madena Is.	(AF-33)	CT3
Madagascar	(AF-39)	5R8
Malawi	(AF-37)	7Q7
Malaysia, Federation of	(A-28)	9M2
Maldives Is.	(A-22)	8QA, VS9
Mali Republic	(AF-35)	TZ
Malta	(E-15)	9H1
Manchuria	(A-24)	BY9
Manihiki Is.	(O-32)	HO1
Marcus Is.	(A-27)	KG61
Mariana Is.	(O-27)	KG6
Marshall Is.	(O-31)	KX6
Martinique	(NA-8)	FM7
Mauritania	(AF-35)	5T5
Mauritius Is.	(AF-39)	VQ8
Mexico	(NA-6)	XE, XF
Midway Is.	(O-31)	KM6
Monaco	(E-14)	3A
Montserrat	(A-23)	J11
Morocco	(AF-33)	CN
Mozambique	(AF-37)	CR7
Muscat & Oman	(A-21)	MP4M
Namibia	(AF-38)	ZS3
Nauru, Republic of	(O-31)	C2
Nassau Is.	(NA-8)	KC4
Nesal	(A-22)	9N1
Netherlands	(E-14)	PA, PE, PI
Netherlands Antilles	(SA-9)	PJ
New Caledonia	(O-32)	FK8
Newfoundland	(NA-5)	VO1
New Guinea, N.E.	(O-28)	VK9
New Hebrides	(O-32)	FUS, YJ
New Zealand	(O-32)	ZL
Nicaragua	(NA-7)	YN
Niger	(AF-35)	5U7
Nigeria	(AF-35)	5N2
Nine Is.	(O-32)	ZK2
Norfolk Is.	(O-32)	VK9
Northern Ireland	(E-14)	GI
Norway	(E-14)	LA
Pakistan	(A-21, 22)	AP
Palmyra Is.	(O-31)	KP6
Panama	(NA-7)	HP
Papua Territory	(O-28)	VK9
Paraguay	(SA-11)	2P
Peru	(SA-10)	OA
Philippines	(O-27)	OU
Phoenix Is.	(O-31)	KB6
Pitcairn Is.	(O-32)	VR6
Poland	(E-15)	SP
Portugal	(E-14)	CT1
Prince Edward & Marion Is.	(AF-38)	ZS2
Puerto Rico	(NA-8)	KP4
Qatar	(A-21)	MP4Q

Reunion Is.	(AF-39).....	FR7
Revillagigedo Is.	(NA-6).....	XE4
Rhodesia	(AF-38).....	ZE
Rio Muni	(AF-36).....	EA0
Rodriguez Is.	(AF-39).....	VQ8
Romania	(E-20).....	Y0
Rwanda	(AF-36).....	9X5
Ryukyu Is.	(A-25).....	KR6, KR8
Sabah	(O-28).....	9M6
Saint Helena Is.	(AF-36).....	ZD7
Saint Martin Is.	(NA-8).....	FS7
Saint Pierre & Miquelon Is.	(NA-5).....	FP8
Sampa (U. S.)	(O-32).....	K56
Sampa, Western	(O-32).....	5W1
San Andres & Providencia	(NA-7).....	HK0
San Marino	(E-15).....	M1
Sao Tome & Principe Is.	(A-36).....	CR5
Sarawak	(O-28).....	9M8
Sardinia	(E-15).....	IS
Saudi Arabia	(A-21).....	HZ, Z7
Scotland	(E-14).....	GM
Senegal	(AF-35).....	6W8
Serrana Bk. & Rincador Cay	(NA-7).....	KS4B
Seychelles Is.	(AF-39).....	VQ9
Sicily	(E-15).....	IT
Sierra Leone	(AF-35).....	9L
Sikkim	(A-22).....	AC3
Singapore	(A-28).....	9V1
Socotra Is.	(AF-37).....	VS9
Solomon Is.	(O-25).....	VR4
Somali Republic	(AF-37).....	60
Somaliand, French	(AF-37).....	FL8
South Africa	(AF-38).....	Z5
South Georgia Is.	(SA-13).....	VP8
South Orkney Is.	(SA-13).....	VP8
South Sandwich Is.	(SA-13).....	VP8
South Shetland Is.	(SA-13).....	CE9, VP8
South Yemen	(A-21).....	70
Soviet Union		
European Russian Soviet Federated		
Socialist Republic	(E-16), UA1, 3, 4, 6	
Asiatic Russian S.F.S.R.	(A-18, 19), UA9, 0	
Ukrainian S. S. R.	(E-16).....	UB5
White Russian S. S. R.	(E-16).....	UC2
Azerbaijdzhan S. S. R.	(A-21).....	UD6
Georgian S. S. R.	(A-21).....	UF6
Armenian S. S. R.	(A-21).....	UG6
Turkmen S. S. R.	(A-17).....	UH8
Uzbek S. S. R.	(A-17).....	UI8
Tadzhik S. S. R.	(A-17).....	UJ8
Kazakh S. S. R.	(A-17).....	UL7
Kirghiz S. S. R.	(A-17).....	UM8
Karelo-Finnish S. S. R.	(E-16).....	UN1
Moldavian S. S. R.	(E-16).....	UO5
Lithuanian S. S. R.	(E-15).....	UP
Latvian S. S. R.	(E-15).....	UQ
Estonian S. S. R.	(E-15).....	UR
Spain	(E-14).....	EA
Spanish Sahara (Rio de Oro)	(A-33).....	EA9
Sudan	(AF-34).....	S1
Surinam	(SA-9).....	P2
Svalbard Is.	(E-40).....	JW
Swan Is.	(NA-7).....	K54
Swaziland	(AF-38).....	ZD5
Sweden	(E-14).....	SK, SL, SM
Switzerland	(E-14).....	HB
Syria	(A-20).....	YK
Taiwan	(A-24).....	BV
Tanzania	(AF-37).....	5H3
Tasmania	(O-30).....	VK7
Thailand	(A-26).....	HS
Tibet	(A-23).....	AC4
Timor Is. (Portuguese)	(O-28).....	CR8
Tinian Is.	(O-27).....	KG61
Togo	(AF-35).....	5V
Tokelau Is.	(O-32).....	ZM7
Tonga (Friendly) Is.	(O-32).....	VR5
Torishima Is.	(A-27).....	JD1
Trindade & Martin Vaz Is.	(SA-11).....	PY0
Trinidad & Tobago Is.	(SA-9).....	9Y4
Tristan de Cunha & Gough	(AF-38).....	ZD9
Tromelin Is.	(AF-39).....	FB8
Trucial States	(A-21).....	MP4T
Tunisia	(AF-33).....	3V8
Turkey	(A-20).....	TA, TC
Turks & Caicos Is.	(NA-8).....	VP5
Uganda	(AF-37).....	5X5
United Nations, Geneva	(E-14).....	4U
United States of America	(NA-3, 4, 5).....	W, K
Upper Volta	(AF-35).....	XT2
Uruguay	(SA-13).....	CX
Vatican City	(E-15).....	HV
Venezuela	(SA-9).....	YV
Vietnam	(A-26).....	3W8
Virgin Is.	(NA-8).....	KV4
Volcano & Bonin Is.	(A-27).....	KG61
Wake Is.	(O-31).....	KW6
Wales	(E-14).....	GW
Wallis & Futuna Is.	(O-32).....	FW8
West Iran	(O-28).....	JZ0
Winward Is. (West Indies)	(NA-8).....	VP2
Yemen	(A-21).....	4W1
Yugoslavia	(E-15).....	YU
Zambia	(AF-36).....	9I, 9J
Zanzibar	(AF-37).....	VO1

TELEGRAPH CODES

CONTINENTAL CODE	MORSE CODE
Used in ham radio	Used on land lines in United States and Canada
<p>A — —</p> <p>B — — · ·</p> <p>C — — · · ·</p> <p>D — — ·</p> <p>E ·</p> <p>F · · — —</p> <p>G · · — —</p> <p>H · · · ·</p> <p>I · ·</p> <p>J · — — —</p> <p>K · — —</p> <p>L · — — ·</p> <p>M — — — —</p> <p>N — — ·</p> <p>O — — — —</p> <p>P — — · ·</p> <p>Q — — — —</p> <p>R — — ·</p> <p>S — — — —</p> <p>T — — — —</p> <p>U — — —</p> <p>V · · — —</p> <p>W — — — ·</p> <p>X — — — —</p> <p>Y — — — —</p> <p>Z — — — —</p>	<p>A — —</p> <p>B — — · ·</p> <p>C — — · · ·</p> <p>D — — ·</p> <p>E ·</p> <p>F · · — —</p> <p>G · · — —</p> <p>H · · · ·</p> <p>I · ·</p> <p>J · — — —</p> <p>K · — —</p> <p>L · — — ·</p> <p>M — — — —</p> <p>N — — ·</p> <p>O — — — —</p> <p>P — — · ·</p> <p>Q — — — —</p> <p>R — — ·</p> <p>S — — — —</p> <p>T — — — —</p> <p>U — — —</p> <p>V · · — —</p> <p>W — — — ·</p> <p>X — — — —</p> <p>Y — — — —</p> <p>Z — — — —</p> <p>& — — — —</p>
There are no space letters in the Continental Code	C, O, Y, Z and & are composed of dots and spaces T is a short dash L is a longer dash Zero (0) is usually abbreviated to T
<p>Figures</p> <p>1 — — — — —</p> <p>2 — — — — —</p> <p>3 — — — — —</p> <p>4 — — — — —</p> <p>5 — — — — —</p> <p>6 — — — — —</p> <p>7 — — — — —</p> <p>8 — — — — —</p> <p>9 — — — — —</p> <p>0 — — — — —</p>	<p>Figures</p> <p>1 — — — — —</p> <p>2 — — — — —</p> <p>3 — — — — —</p> <p>4 — — — — —</p> <p>5 — — — — —</p> <p>6 — — — — —</p> <p>7 — — — — —</p> <p>8 — — — — —</p> <p>9 — — — — —</p> <p>0 — — — — —</p>
<p>Punctuation</p> <p>(.) — — — — —</p> <p>(,) — — — — —</p> <p>(?) — — — — —</p> <p>(:) — — — — —</p> <p>(;) — — — — —</p> <p>(-) — — — — —</p> <p>(!) None at present</p> <p>(') — — — — —</p> <p>(/) — — — — —</p> <p>() — — — — —</p> <p>(") — — — — —</p>	<p>Punctuation</p> <p>(.) — — — — —</p> <p>(,) — — — — —</p> <p>(?) — — — — —</p> <p>(:) — — — — —</p> <p>(;) — — — — —</p> <p>(-) — — — — —</p> <p>(!) — — — — —</p> <p>(') — — — — —</p> <p>(/) — — — — —</p> <p>() — — — — —</p> <p>(") — — — — —</p>

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A2C..... Botswana	KG4..... Guantanamo Bay, Cuba	VP9..... Bermuda Is.
AC3..... Sikkim	KG6..... Mariana Is. (Guam)	VQ1..... Zanzibar
AC4..... Tibet	KG6I..... Marcus, Volcano & Bonin Is.	VQ8..... Chagos, Mauritius & Rodriguez Is.
AC5..... Bhutan	KG6S..... Saipan Is.	VQ9..... Seychelles Is.
AP..... Pakistan	KG6T..... Tinian Is.	VR1..... Br. Phoenix, Ellice, Gilbert & Ocean Is.
BV..... Taiwan	KH6..... Hawaii	VR2..... Fiji Is.
BY..... China	KJ6..... Johnston Is.	VR3..... Fanning, Line Is.
BY9..... Manchuria	KL7..... Alaska	VR4..... Solomon Is.
CE..... Chile	KM6..... Midway Is.	VR5..... Tonga Is.
CE9..... South Shetland Is.	KP4..... Puerto Rico	VR6..... Pitcairn Is.
CE9A..... Easter Is.	KP6..... Jarvis & Palmyra Is.	V55..... Brunei
CE9Z..... Juan Fernandez Is.	KR6, KR8..... Ryukyu Is. (Okinawa)	V56..... Hong Kong
CM, CO..... Cuba	KS4..... Swan Is.	V59..... Maldives, Karaman, Socotra Is.
CN..... Morocco	KS4B..... Serrana Bank & Roncador Cay	VU..... India
CP..... Bolivia	KS6..... U.S. Samoa	VU4..... Laccadive Is.
CR3..... Portuguese Guinea	KV4..... Virgin Is.	VU5..... Andaman & Nicobar Is.
CR4..... Cape Verde Is.	KW6..... Wake Is.	W..... United States of America
CR5..... Sao Tome & Principe Is.	KX6..... Marshall Is.	
CR6..... Angola	KZ5..... Canal Zone	
CR7..... Mozambique	LA..... Norway	XE, XF..... Mexico
CR8..... Goa	LU..... Argentina	XE4..... Revillagigedo Is.
CR8..... Timor Is. (Portuguese)	LX..... Luxembourg	XT2..... Upper Volta
CR9..... Macao	LZ..... Bulgaria	XU..... Cambodia
CT1..... Portugal	M1..... San Marino	XWB..... Laos
CT2..... Azores Is.	MP4..... Bahrain and Das Is.,	XZ..... Burma
CT3..... Madeira Is.	Muscat & Oman, Qatar, Trucial States	
CX..... Uruguay	OA..... Peru	YA..... Afghanistan
C2..... Republic of Nauru	OD5..... Lebanon	YB, YC, YD..... Indonesia
C31..... Andorra	OE..... Austria	YL..... Iraq
DC, DJ, DK, DL..... West German Federal Rep.	OH..... Finland	YJ..... New Hebrides
DM..... East German Democratic Rep.	OH8..... Aland Is.	YK..... Syria
DU..... Philippines	OK, OL..... Czechoslovakia	YN..... Nicaragua
EA..... Spain	ON..... Belgium	YO..... Rumania
EA6..... Balearic Is.	OX..... Greenland	YS..... El Salvador
EA8..... Canary Is.	OY..... Faeroes Is.	YU..... Yugoslavia
EA9..... Spanish Sahara, Ilini, Ceuta y Melilla	OZ..... Denmark	YV..... Venezuela
EL..... Ireland	PA, PE, PI..... Netherlands	ZA..... Albania
EL, 5L..... Liberia	PJ..... Netherlands Antilles	ZB2..... Gibraltar
EP..... Iran	PJ2..... Curacao	ZC4..... Cyprus
ET3..... Ethiopia	PJ3..... Aruba	ZD3..... Gambia
F..... France	PJ4..... Bonaire	ZD5..... Swaziland
FB8..... Austral and Antarctic French Lands,	PJ5..... St. Eustatius	ZD7..... Saint Helena
Amsterdam, St. Paul, Crozet, Kerguelen,	PJ6..... Saba Is.	ZD8..... Ascension Is.
Tromelin Is.	PJ7..... Saint Maarten	ZD9..... Tristan da Cunha & Gough Is.
FC..... Corsica	PY..... Brazil	ZE..... Rhodesia
FG7..... Guadeloupe Is.	PY7..... Fernando de Noronha Is.	ZF1..... Cayman Is.
FH8..... Comoro Is.	PY8..... Trindade & Martin Vaz Is.	ZK1..... Cook Is.
FK8..... New Caledonia	PZ..... Surinam	ZK2..... Niue Is.
FL8..... French Somaliland	SK, SL, SM..... Sweden	ZL..... New Zealand
FM7..... Martinique	SP..... Poland	ZM7..... Tokelau Is.
F08..... French Polynesia, Clipperton Is.	ST..... Sudan	ZP..... Paraguay
FP8..... St. Pierre & Miquelon Is.	SU..... Egypt (United Arab Republic)	ZS..... South Africa
FR7..... Reunion Is.	SV..... Crete, Greece	ZS2..... Prince Edward & Marion Is.
FS7..... Saint Martin	SV5..... Dodecanese Is.	ZS3..... Namibia (South-West Africa)
FU8..... New Hebrides	TA, TC..... Turkey	3A..... Monaco
FW8..... Wallis & Futuna Is.	TF..... Iceland	3C..... Equatorial Guinea
FY7..... French Guiana	TG..... Guatemala	3V8..... Tunisia
G..... England	TI..... Costa Rica	3W8..... Vietnam
GC..... Channel Is.	TI9..... Cocos Is.	3Y..... Norwegian Terr. in Antarctica
GD..... Isle of Man	TJ..... Cameroon	457..... Ceylon
GI..... Northern Ireland	TL8..... Central African Republic	4U..... United Nations, Geneva, Turin
GM..... Scotland	TN8..... Republic of Congo (Brazzaville)	4W1..... Yemen
GW..... Wales	TR8..... Gabon	4X4, 4Z4..... Israel
HA, HG..... Hungary	TT8..... Chad	5A..... Libya
HB..... Switzerland	TU2..... Ivory Coast	5H3..... Tanzania
HB0..... Liechtenstein	TY..... Dahomey	5N2..... Nigeria
HC..... Ecuador	TZ..... Mali Republic	5R8..... Madagascar (Malagasy Republic)
HCB..... Galapagos Is.	UA1, 3, 4, 6..... European Russian	5T5..... Mauritania
HD1..... Manihiki Is.	Soviet Federated Socialist Republic	5U7..... Niger
HH..... Haiti	UA9, 0..... Asiatic Russian S.F.S.R.	5V..... Togo
HI..... Dominican Republic	UB5..... Ukrainian S.S.R.	5W1..... Western Samoa
HK..... Colombia	UC2..... White Russian S.S.R.	5X5..... Uganda
HK0..... San Andres & Providencia Is.	UD6..... Azerbaidzhan S.S.R.	5Z4..... Kenya
HM, HL9..... Korea	UF6..... Georgian S.S.R.	60..... Somali Republic
HP..... Panama	UG6..... Armenian S.S.R.	6W8..... Senegal
HR..... Honduras	UH8..... Turkmen S.S.R.	6Y5..... Jamaica
HS..... Thailand	UI8..... Uzbek S.S.R.	7G1..... Republic of Guinea
HV..... Vatican City	UJ8..... Tadzhik S.S.R.	70..... South Yemen
HZ..... Saudi Arabia	UL7..... Kazakh S.S.R.	7P8..... Lesotho
I..... Italy	UM8..... Kirghiz S.S.R.	7Q7..... Malawi
IS..... Sardinia	UN1..... Karelo-Finnish S.S.R.	7X..... Algeria
IT..... Sicily	UO5..... Moldavian S.S.R.	7Z..... Saudi Arabia
JA, JH, JR..... Japan	UP..... Lithuanian S.S.R.	8P6..... Barbados Is.
JD1..... Torishima Is.	UQ..... Latvian S.S.R.	8QA..... Maldives Is.
JT1..... Mongolia	UR..... Estonian S.S.R.	8R..... Guyana
JW..... Svalbard Is.	VE..... Canada	9G1..... Ghana
JX..... Jan Mayen Is.	VK..... Australia	9H1..... Malta
JY..... Jordan	VK2..... Lord Howe Is.	9I, 9J..... Zambia
JZ0..... West Iran	VK7..... Tasmania	9K2..... Kuwait
K..... United States of America	VK9..... New Guinea, Papua, Christmas,	9L..... Sierra Leone
KA..... U.S. Personnel in Japan	Cocos-Keeling, Norfolk Is.	9M2..... Federation of Malaysia
KB6..... Baker, Canton, Enderbury,	VK0..... Heard & Macquarie Is., Antarctica	9M6..... Sabah
Howland & Phoenix Is.	V01..... Newfoundland	9M8..... Sarawak
KC4..... Navassa Is.	V02..... Labrador	9N1..... Nepal
KC4AA, KC4US..... Antarctica	VP1..... British Honduras	9Q5..... Republic of the Congo (Kinshasa)
KC6..... Caroline Is.	VP2..... Leeward & Windward Is.	9U5..... Burundi
KG1..... U.S. Personnel in Greenland	VP5..... Turks & Caicos Is.	9V1..... Singapore
	VP7..... Bahama Is.	9X5..... Rwanda
	VP8..... Falkland, S. Georgia, S. Orkney,	9Y4..... Trinidad & Tobago Is.
	S. Sandwich, S. Shetland Is., Graham Land	



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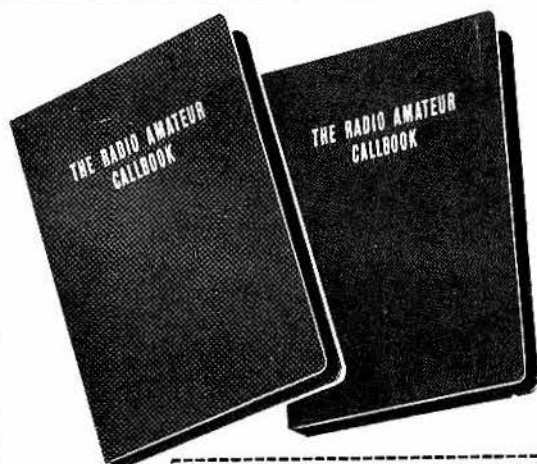
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A. R. R. L. COUNTRIES LIST

The ARRL Postwar Countries List is the official standard used in connection with the DX Century Club. To qualify for the DX Century Club Award, an applicant must submit confirmations from at least 100 different countries contacted after November 15, 1945, in accordance with the Postwar DXCC Rules. Copies of the DXCC Rules will be furnished by ARRL on request.

AC3.....	Sikkim	KJ6.....	Johnston Island	VQ9.....	Chagos Islands
AC4.....	Tibet	KL7.....	Alaska	VQ9.....	Desroches
AC.....	British	KM6.....	Midway Islands	VQ9.....	Famagusta
AP.....	East Pakistan	KM4.....	Puerto Rico	VQ9.....	Seychelles
AP.....	West Pakistan	KP6.....	Palmyra Group, Jarvis Is.	VR1.....	British Phoenix Islands
BV.....	Formosa	KR6, B.....	Ryukyu Islands	VR1.....	Gilbert & Ellice Is.
BY.....	China	KS4B, HK6.....	Serrana Bank & Roca del Cay	VR2.....	Fiji Islands
C9.....	Manchuria	KS4.....	Swan Islands	VR3.....	Fanning & Christmas Is.
CL.....	Chile	KS6.....	American Samoa	VR4.....	Solomon Islands
CE9AA-AM, FBBY, KC4, LA, LU-Z, OR4, UA1, VK6, VP8, ZL5, 6J.....	Antarctica	KV4.....	Virgin Islands	VR5.....	Tonga Islands
CE9AA-AZ (See VP8)		KW6.....	Wake Island	VR6.....	Pitcairn Island
CE9.....	Easter Island	KX6.....	Marshall Islands	*VS1, 9M4, 9V1.....	Singapore
CE9.....	San Pedro	KZ9.....	Canal Zone	VS1, 9M2 (See 9M2, 4)	
CE9.....	Juan Fernandez Arch.	LA, LG (See JX, JW)	Norway	VS2 (See 9M2)	
CM, CO.....	Cuba	LA/G (See 3Y)		VS4.....	Sarawak
CN2, B, 9.....	Tangier	LA (See CE9AA-AM)		VS4, ZCS (See 9M6, 8)	
CP.....	Bolivia	LU.....	Argentina	VS5.....	Brunei
CR 3, 5.....	Portuguese Guinea	LU-Z (See CE9AA-AM PB, VP8)		VS6.....	Hong Kong
CR4.....	Cape Verde Islands	LX.....	Luxembourg	VS9A, P, S.....	Aden & Socatra
CR5.....	Principe, Sao Tome	LZ.....	Bl. Is. Is.	VS9K.....	Kamran Is.
CR6.....	Angola	M1 (See 9A1)		*VS9H.....	Kuria Muria Is.
CR7.....	Mozambique	MP4B.....	Bahrein	VS9M (See 8Q)	
*CR8.....	Damas, Du	MP4M, VS90.....	Sultanate of Muscat & Oman	VS90 (See MP4M)	
*CR9, CR1B.....	Portuguese Timor	MP4D, T.....	Trucial Oman	VU.....	Andaman & Nicobar Is.
CR9.....	Macau	OA.....	Peru	VU.....	India
CT1.....	Portugal	OD1.....	Lebanon	VU.....	Laccadive Islands
CT2.....	Azores	OE.....	Austria	W (See K)	
CT3.....	Madeira Islands	OH, OF.....	Finland	XE, XF, 4A.....	Mexico
CX.....	Uruguay	OH.....	Aland Islands	XF4.....	Revilla Gigedo
DJ, DK, DL, DM.....	Germany	OK.....	Czechoslovakia	XP (See DX)	
DU.....	Philippine Islands	ON.....	Belgium	*XT.....	Voltaic Rep.
EA.....	Spain	ON, 0 (See 9Q5)		XU.....	Cambodia
EA6.....	Balearic Islands	OR4 (See CE9AA-AM)		XV5 (See 3WB)	
EA8.....	Canary Islands	OK, KG1, KP.....	Greenland	XW8.....	Las
EA9.....	Rio de Oro	OZ.....	Faroe Islands	XZ2.....	Burma
EA9.....	Spanish Morocco	PA, PE, PI.....	Denmark	YA.....	Alghiras
EAB.....	Spanish Guinea	PJ.....	Netherlands Antilles	Y1, FUB.....	New Hebrides
EL.....	Republic of Ireland	PJ-M, S.....	St. Maarten	YK.....	Syria
EP.....	Italy	PK (See 8F)		YN, YNB.....	Nicaragua
ET2.....	Eritrea	*PK1, 2, 3.....	Java	YO.....	Rumania
ET3.....	Ethiopia	*PK4.....	Sumatra	YS.....	Salvador
F.....	France	*PK5.....	Netherlands Borneo	YU.....	Yugoslavia
FA (See 7X)		*PK6.....	Celebes & Molucca Islands	YU.....	Venezuela
FBBZ (See 7X)		PK.....	Arsona	Z1.....	Aves Island
FBBY (See CE9AA-AM)	Amsterdam & St. Paul Is.	PY.....	Brazil	ZB1.....	Albania
FBBW.....	Graetz Is.	PYB.....	Fernando de Noronha	ZB2.....	Gibraltar
FBBX.....	Kerguelen Islands	PYB.....	St. Peter & St. Paul's Rocks	ZC3 (See 9H1)	
FBB.....		PYB.....	Trendale & Martin Vaz Is.	ZC4 (See 9B4)	
FBB (See FHB)		PZ1.....	Sunnam	ZC5 (See 9M6, 8)	
FBB (See FR7)		SK, SL, SM.....	Sweden	*ZC6.....	British North Borneo
FBB (See FR7)		SP.....	Poland	ZC6.....	Palestine
*FC.....	Concisa	ST2.....	Sudan	ZD1 (See 9L1)	
FD (See 5V)		SV.....	Egypt	ZD2 (See 9N2)	
FE8 (See TJ)		SV.....	Crete	ZD3.....	The Gambia
FF4 (See TJ)		SV.....	Dodecanese	ZD4 (See 9G1)	
FF7 (See TJ)		TA.....	Greece	ZD4.....	Gold Coast, Togoland
FF8 (See TJ)		TF.....	Iceland	ZD5, ZST.....	Swaziland
FFR (See TJ)		TF.....	Guatemala	ZD6 (See 7Q7)	
FFB (See 5J7)		TF.....	Guatemala	ZD7.....	St. Helena
FFB (See XT)		TF.....	Costa Rica	ZD8.....	Ascension Island
FFB (See 6W8)		TF.....	Cocos Island	ZD9.....	Tristan da Cunha & Gough Island
*FFB.....	French West Africa	TJ, FEB.....	Cameroun	ZE.....	Rhodesia
FG7.....	Guadeloupe	*TL.....	Central African Rep.	ZF1, VP5.....	Cayman Islands
FHB, FBB.....	Comoro Islands	*TL.....	Congo Rep.	ZK1.....	Cook Islands
*FIB.....	French Indo-China	*TL.....	Gabon Rep.	ZK1.....	Mannix Islands
FIB.....	New Caledonia	*TL.....	Chad Rep.	ZK2.....	Nue
FLB.....	French Somaliland	*TL.....	Ivory Coast	ZL.....	Auckland Is. & Campbell Is.
FM7.....	Martinique	*TY.....	Dahomey Rep.	ZL.....	Clutnam Islands
*FN.....	French Polynesia	*TZ.....	Mari Rep.	ZL.....	Kermadec Islands
FOS.....	Guipoter Island	UA, UV, UW, U, UN1.....	Empire Russian S. F. S. R.	ZL (See CE9AA-AM)	New Zealand
FOS.....	French Oceania	UA1 (See CE9AA-AM)	France Jodel Land	ZL5 (See CE9AA-AM)	
FOS.....	Maria Theresa	UA2.....	Kalmukgatsk	ZM6 (See 5W1)	
FOS.....	St. Pierre & Miquelon Is.	UA, UV, UW, U.....	Asiatic R. S. F. S. R.	ZM7.....	Tokelais
FOS (See TJ)		UB5, UB5, UB5.....	Winder Rissman, S. S. R.	ZP.....	Paraguay
FOS (See TJ)		UB6.....	Azerbaijan	ZS1, Z, 4, 5, 6.....	South Africa
FOS (See TJ)		UB6.....	Georgia	ZS3.....	Prince Edward & Marion Is.
FOS (See TJ)		UB6.....	Armenia	ZS7 (See 7B5)	Southwest Africa
*FOS.....	French Equatorial Africa	UB6.....	Turkmen	ZS8 (See 7P8)	
*FR7.....	Glorioso Islands	UB6.....	Uzbek	ZS9.....	Dotswana
*FR7.....	Juan de Nova	UB6.....	Tadrik	ZM.....	Minerva Reefs
FR7.....	Reunion	UL7.....	Kazakh	IS.....	Sarati Is.
FR7.....	Trinidad	UM5.....	Kirgiz	3A.....	Monaco
FS7.....	Saint Martin	UM5.....	Karela-Finnish Republic	3B, 3C (See VE)	
IUB (See YU)		UP1.....	Moldavia	3B8, XVB.....	Tunisia
FWS.....	Wallis & Futuna Islands	UP2.....	Lithuania	3Y, 7G1.....	Sierra Leone
FY7.....	French Guinea & Iles	UP2.....	Latvia	3Y, LA, G.....	Bouvet Island
G.....	England	UP2.....	Estonia	4A (See XE)	
GC.....	Guernsey & Jersey Is. and	VE, VO, 3B, 3C.....	Canada	4S7.....	Ceylon
GD.....	Isle of Man	VK.....	Australia Inc. Tasmania	4U.....	I. T. U. Geneva
GI.....	Northern Ireland	VK.....	Lord Howe Island	4W.....	Yemen
GM.....	Scotland	VK4.....	Will's Islands	4X, 4Z.....	Israel
GW.....	Wales	VK4, ZC3.....	Christmas Island	5A.....	Lilya
HA, HE.....	Hungary	VK9.....	Cocos Islands	5B4, ZC4.....	Cyprus
HB.....	Switzerland	VK9.....	Nauru Island	5H3, VQ3.....	Taiwan
HBO, HE.....	Liechtenstein	VK9.....	Norfolk Island	5K2, ZD2.....	Nagana
HC.....	Island	VK9.....	Papua Territory	5B8, FBB.....	Malaysia Rep.
HG.....	Galapagos Islands	VK9 (See CE9AA-AM)	Territory of New Guinea	*ST.....	Mauritania
HE (See HBB)		VKD.....	Heard Island	*SV7.....	Niger Rep.
HI.....	Haiti	VKD.....	Macquarie Island	SV.....	Togo Rep.
HI.....	Dominican Republic	VO (See VL)		SV, ZM6.....	Western Samoa
HK.....	Colombia	VP1.....	Newfoundland, Labrador	5X5, VQ5.....	Uganda
HK6.....	Baja Nuevo	VP2.....	British Honduras	*Z4, VQ4.....	Kenya
HK6.....	Malpelo Is.	VP2.....	Angilla	601, 2, 6.....	Somali Rep.
HK6.....	San Andres & Providencia	*VP2A.....	Antigua, Barbuda	*6WS, FF8.....	Senegal Rep.
HKR (See KS4B)		*VP2V.....	British Virgin Islands	6VS, VP4.....	Jamaica
HL.....	Korea	*VP2D.....	Dominica	*7G1 (See 3K)	
HR.....	Honduras	*VP2C.....	Grenada & Dependencies	VP8, ZS8.....	Lasotho
HS.....	Thailand	*VP2M.....	Montserrat	707, ZD6.....	Malawi
HV.....	Vatican	*VP2K.....	St. Kitts, Nevis	7X, FA.....	Algeria
HZ, 7Z.....	Saudi Arabia	*VP2L.....	St. Lucia	7Z (See HZ)	
IT.....	Italy	*VP2S.....	St. Vincent & Dependencies	*8F, PK.....	Indonesia
*IT.....	Italian Somaliland	VP3 (See BR)		8J (See CE9AA-AM)	
IS1.....	Sardinia	VP4 (See 9I4)		BP, VP6.....	Barbados
JA, JH, KA.....	Japan	VP5 (See 2F1)		8D, VS9M.....	Maldives Islands
JT.....	Monrovia	VP5 (See 6Y5)		8E, VP3.....	Guyana
JX, LA, P.....	Jan Mayen	VP5.....	Turks & Caicos Islands	8Z.....	Saudi Arabia, Iraq Neutral Zone
JY.....	Svalbard	VP6 (See 8P)		8Z5 (See 9K3)	
*JZ.....	Netherlands New Guinea	VP7.....	Bahama Islands	9A1, (M1).....	San Marino
K.....	United States of America	VP8 (See CE9AA-AM)		*9G1, ZD4.....	Ghana
K1 (See JA)		VP8.....	Falkland Islands	9H1, ZB1.....	Malta
K4 (See CE9AA-AM)		VP8, LU-Z.....	So. Georgia Is.	9J2, VQ2.....	Zambia
K4.....	Nazawa Island	VP8, LU-Z.....	So. Orkney Is.	9K2.....	Kuwait
K6.....	Eastern Caroline Is.	VP8, LU-Z, CE9AA-AZ.....	So. Shetland Is.	9K3, 8Z5.....	Kuwait, Saudi Arabia Neutral Zone
K6.....	Western Caroline Is.	VP9.....	Bermuda Islands	9L1, ZD1.....	Sierra Leone
KG1 (See DX)		VQ2 (See 9J2)	Zanzibar	*9M2.....	Malaya
KG4.....	Guantanamo Bay	VQ3 (See 5H3)		9M4, 4.....	West Malaysia
KG6.....	Giam	VQ4 (See 5Z4)		9M6, 8.....	East Malaysia
KG6, KA1.....	Bonin & Marcus Islands	VQ5 (See 5K1)		9N1.....	Nepal
KG6, S, T.....	Mariana Islands	VQ6.....	British Somaliland	9Q5, 0Q5, 0.....	Rep. of the Congo
KG8.....	Hawaiian Islands	VQ8.....	Agalega & St. Brandon	*9S4.....	Saar
KHB.....	Kure Island	VQ8.....	Mauritius	*9U5.....	Burundi
		VQ9.....	Rodriguez Island	9V1 (See VS1)	Ruanda-Urundi
			Aldabra	*9X5.....	Rwanda
				9Y4, VP4.....	Trinidad & Tobago
					Blenheim Reef
					Geyser Reef



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TELEGRAPHERS' ABBREVIATIONS IN CURRENT USE

◌ denotes short space, as in American Morse o, e, e, e, e, e.
— denotes letters sent together, as in ar, sent

- A -

aa	all after
ab	all before
abl	able
abt	about
ads, adr	address
adv	advise
af	Africa
aftrm	afternoon
agn	again
ahd	ahead
alnq	along
am	amplitude modulation
ani	any
anr	another
ant	antenna
app	appreciate
ar	end of message
as, as m	wait, wait a minute
at	fractions follow
aw	auf wiedersehn (Ger), see you later

- B -

b	be
b4	before
balun	balanced-to-unbalanced
bc, bcl	broadcast, broadcast listener
bcu	be seeing you
bd	buenos dias (Sp), bad
bda	birthday
bde, bo, bth	both, as in "u5 bee", up both (Morse)
bfo	beat frequency oscillator
bjr	bon jour (Fr)
bk, bkg	back, break, black, book, breaking
bkr	breaker, circuit-breaker
bn	been, brown, between, buenas noches (Sp)
ba	answer to no (request)
brq, brmq	bearing, heading
bsr	bon soir (Fr)
btr	better
buk	book

- C -

c	yes
cd	card, could
cd, cud, cndt	could, couldn't
cfm, cfmq	confirm, confirming
ck	check
ckt, cct	circuit
cl, cli	call, calling, closed
clbk	callbook
clx	clicks
clr	clear
cnlx, condx, cdx	conditions
cnt, cnti, cnty	count, county
cnvt	convention
coz, cos, cuz, becuz	because
cop	copy
ca	general call to all stations
cs	call sign, call letters
cua, cuagn	see you again
cuk	see you later
cun, cni, cny	came, coming
cupla	a couple of
cw	continuous wave, manual keying

- D -

da	day
dhl	double
dcn	direction
dct	direct
de	from
df	direction finder
dif, diff	difference
dfr, dld	dealer, deliver, delivered
dn, d	down (in frequency)
dnt, dmi	do not, don't mention it
dpe	dope, information
dr	dear
ds	thanks, danke schon (Ger)
dsnt	does not
dsw	goodbye, do svidaniya (Russian)
dunno	don't know
dx	distance, or rare station
dxpdr	dx expedition

- E -

em	old man
eh	?
el, els	antenna element(s)
em	them
eni, enibdi, enihw	any, anybody, anyhow
ere	here
es, es	and (from Morse "E", sent)
eta	estimated time of arrival
etd	estimated time of departure
eu	Europe

- F -

fb, vfb	fine business, good (enthusiastic approval)
fd	field day, feed, food
fer	far
fiver	QSA-5
fld	field, filed
flr	floor
fm, fm	from, frequency modulation
fnd	friend, find, found
fni	family
foxes	teleprinter test tapes
freq, fq	frequency
fwd	forward
fyi	for your information

- G - (Cont.)

gld	glad
gn, gng	gone, green, going
gnd	ground
gotta	got to, have to, must
go	ground plane, group (word)
grs	groups (as in msg code groups)
gud	good
gtgs	greetings
gv, gvg	give, giving

- H -

hd, hrd	had, hard, heard
hdg	heading, antenna azimuth
hed	he would
hi	high, laughter, (sometimes !)
hlo	hello
hlv	hasta la vista (Sp), see you later
hpe, hpg	hope, hoping
hpi	happy
hpn, wa hpn	happen, what happened
hq, hqtrs	headquarters
hr, hrg, hrs	here, hear, hour, hearing, here is, hours
hw, hwt, hvg	have, haven't, having
hvi	heavy
hw, hws	how? how is?

- I -

i?	ready? here goes the tape
id	I would
ie	clear? (response: i-go, e-wait)
im	I'm, him, intermodulation
imf	?
info	information
irpt	I repeat

- K -

k	go ahead, end of transmission
ka	beginning of transmission (formal)
klix	clicks
klvb	que (ke) le vaya bien (Sp) "That it goes well with you"
kn	go ahead, but only the station(s) called, I will answer no other calls, known
knw	know

- L -

lkg	looking
ll	landline, telephone or telegraph
lng	long
lotsa	lots of
lp	long path (long way around earth)
lfn	listen
ltr	letter, later
lv, lvq	leave, leaving
lw	long wave, "lone wolf" (independent DXer)

- M -

mag, rag	magazine
mci, mci bcp	merci, merci beaucoup (Fr), thanks
mgr	manager
mi	my
mil, mill, ma	milliampere, typewriter
min	minute, minimum
mk	mark (opposite of space)
ml, mlg	mail, mailing
mng	morning, meaning
mnf	many
mnl	manual
mo	moment
msg	message

- N -

n	no
nd	nothing doing
ng	no good
nll	nothing
nir	lazy "nir"
nm	nothing more, no more
nn	noon
no	know
nr	near, number
nvt	never
nw	now

- O -

ob, eeb	old boy
oc	old chap
ok, eek	all correct
ol	old lady
om, eem	old man
op, opr	operator
opn, ops	operation, operating
ot	old timer

- P -

pa	power amplifier
pbl, pbli	probable, preamble, probably
ptcs	practices
pd	period, paid
pdg	pure dc, clean note
pkq	package, parking
plsr	please
ppgn	propagation
ppl	people
prtbl	portable
pse, pls, psd	please, pleased
psbl, psbli	possible, possibly
psn, posn	position
pt, ptd, ptg	point, part, pointed, pointing
prw	power

- Q -

qhm	tuning from high frequency to middle of band
qlf	try sending with left foot awhile
qlm	tuning from low frequency to middle of band
qlz	operator too lazy
qmh	tuning from middle frequency to high frequency
qmf	tuning from middle frequency to low frequency
qml	try mailing your lfc
qrm	man-made electrical noise
qsl	mail card confirming qso
qsll	send card after receiving mine
nst	of interest to all amateurs

- R -

r	received
rac	rectified ac
rc	rag chew
rcd, recd	received
rcr, recr, rcvr, rx	receiver
rd	read (copy), red
rdi, rdy	ready
rdo	radio, radio station
re	concerning
reg, regs	regular, regulations
rto	righto
rm	room
rng	running
rockbound, rockbnd	crystal controlled, no vfo
rpt	report, repeat
rq	request
rst	readability 1-5, strength 1-9, tone 1-9

- S -

sa, sez, sed, sa	say, says, said, South America
sae	self-addressed envelope
sase	self-addressed stamped envelope
sb, ssb	single sideband
sgd	signed
shd, shud, shudn't	should, shouldn't
sig, sigs	signal(s), signature
simn	simultaneously
sked	schedule
sl	see you later
sn	soon, seen, signal/noise
sp	short path (the closer great-circle path)
sri	sorry
ss	sweepstakes
ssn	season, as in "ssns gtgs"
stn	station
su	I'll see you
sum	some
simbdi	somebody
svc	service
svl	several
sw	switch, short wave
\$	dollar sign "S"

- T -

tbl, tbl	trouble
tlc	traffic, messages
thr	there, their
tmw	tomorrow
tnq	tuning, thing
tnk	thank
tnsmn	transmission
tr	transit, position, there, transmit/receive
T/R	transmit/receive
tri	tricks
tt, tts	that, that is
tu, tku, tnx, tks	thank you, thanks
tv, tvi	television, television interference
tw	telegram
tx, trans	transmitter

- U -

u, no	you, upward in frequency
ulb	vfb, very fine business (Rus)
uk	United Kingdom
ul, uld	you will, you would
undld	undelivered
unld	unheard
ur, urs	your, yours
ul	universal time, GMT, "Zebra" time

- V -

va	signing off (same as sk)
vert	vertical
vfb	very fine business
vfo	variable-frequency oscillator
vjo	vicio (Sp), old man
vnx	voice-operated switch
vy, vri	very
vxn	variable crystal oscillator

- W -

w, wt	watt
wa	word after
wat, watsa	what, what do you say?
wb	word before
wd	word, would
wet	who?
wec	we would
wh	white
wid	with
wilco	will comply, will do
wk, wkq	week, weak, work, working, QSOing
wri	worry
wx, wea	weather

- X -

xtl	crystal
xtr, xmlr	transmitter
xq	fill, or repeat of unreceived copy

- Y -

yda	yesterday
yl, xyl	young lady, married young lady
yr	year, your

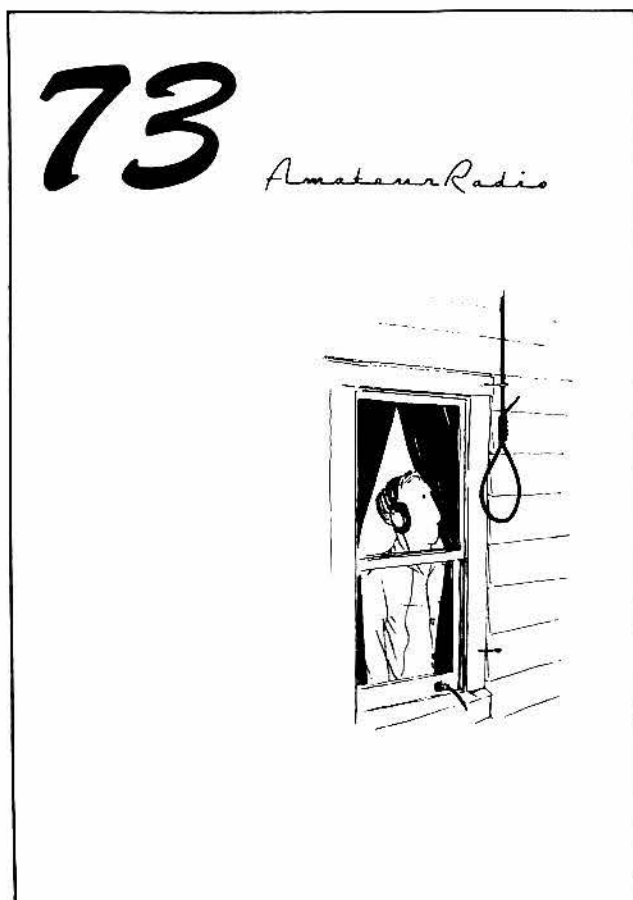
- Z -

z	Greenwich Mean Time, UT, "zebra"
zedder	New Zealander
zi	zone of the interior (continental USA)
zilch	nothing

NUMBER CODE:

1	- a	6	- 6
2	- u	7	- b
3	- v	8	- d
4	- 4	9	- n
5	- e	0	- i

73.....best wishes
88.....love and kisses
99 (rare).....keep out



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GREAT CIRCLE BEARINGS IN THE UNITED STATES

	ATLANTA, GA.	BIRMINGHAM, ALA.	BISMARCK, N. D.	BOSTON, MASS.	BUFFALO, N. Y.	CHARLESTON, W. VA.	CHEYENNE, WYO.	CHICAGO, ILL.	CLEVELAND, OHIO	COLUMBIA, S. C.	DALLAS, TEXAS	DENVER, COLORADO	DES MOINES, IOWA	DETROIT, MICH.	EL PASO, TEXAS	HELENA, MONTANA	HOUSTON, TEXAS	INDIANAPOLIS, IND.	JACKSONVILLE, FLA.	KANSAS CITY, MO.	LITTLE ROCK, ARK.	LOS ANGELES, CALIF.	LOUISVILLE, KY.	MIAMI, FLORIDA	MILWAUKEE, WIS.	MINNEAPOLIS, MINN.	NASHVILLE, TENN.	NEW ORLEANS, LA.	NEW YORK, N. Y.	NORFOLK, VA.	PHILADELPHIA, PA.	PHOENIX, ARIZONA	PITTSBURGH, PA.	ST. LOUIS, MO.	SALT LAKE CITY, UTAH	SAN FRANCISCO, CALIF.	SEATTLE, WASHINGTON	WASHINGTON, D. C.	WILMINGTON, N. C.
ATLANTA, GA.		264	322	47	24	25	301	343	15	86	269	297	320	7	271	310	251	347	145	306	281	281	347	154	345	331	321	234	48	64	48	278	27	318	296	289	308	48	84
BIRMINGHAM, ALA.	82		326	50	31	40	304	356	26	84	268	299	328	17	270	312	246	5	125	314	287	281	10	142	355	338	0	219	52	67	53	278	37	333	298	290	309	53	83
BISMARCK, N. D.	132	137		92	97	115	209	114	165	124	167	205	133	104	198	273	165	119	132	148	150	233	123	135	109	108	131	151	99	111	102	217	106	134	237	249	282	107	119
BOSTON, MASS.	236	241	291		277	247	278	273	267	226	254	275	275	274	262	293	246	263	220	268	253	273	256	207	278	286	249	237	235	219	233	268	258	262	280	280	295	236	217
BUFFALO, N. Y.	208	217	291	92		206	273	264	237	192	241	269	268	261	252	290	231	243	191	258	237	267	231	184	274	286	225	219	118	160	134	261	199	248	276	276	293	159	174
CHARLESTON, W. VA.	208	223	307	61	24		287	309	359	174	251	282	293	345	260	300	238	293	180	279	251	274	270	174	316	311	245	223	66	108	71	269	31	275	286	282	301	80	143
CHEYENNE, WYO.	108	112	26	76	76	91		81	81	103	140	187	83	79	189	319	143	90	113	101	119	241	95	119	76	62	104	128	81	92	83	219	84	98	268	262	303	87	100
CHICAGO, ILL.	161	175	302	82	78	125	272		93	144	221	266	268	80	242	293	210	151	155	245	208	262	157	156	350	308	173	190	91	116	97	254	101	212	274	272	295	106	131
CLEVELAND, OHIO	197	209	297	80	55	179	277	277		176	240	272	275	310	252	293	228	245	180	261	235	268	226	175	290	296	219	214	95	136	105	262	127	250	278	277	296	124	156
COLUMBIA, S. C.	268	267	317	41	10	354	299	329	356		270	295	311	350	271	308	256	326	189	300	279	282	320	174	331	323	297	246	39	53	37	279	7	305	295	290	307	33	85
DALLAS, TEXAS	81	82	349	57	49	61	325	36	50	80		319	15	45	266	325	157	47	97	15	61	280	55	112	32	11	65	115	60	71	61	277	55	40	308	291	315	63	80
DENVER, COLORADO	103	107	22	73	72	87	6	75	77	99	134		74	74	189	325	138	84	109	91	112	246	90	116	70	55	98	124	78	88	80	224	80	91	283	267	308	83	96
DES MOINES, IOWA	134	144	318	80	78	105	271	84	87	123	197	262		81	231	297	187	105	135	197	171	257	116	141	69	5	133	165	87	104	91	247	92	137	273	270	296	97	115
DETROIT, MICH.	188	200	295	86	79	164	273	263	129	168	233	268	268		248	291	222	224	174	254	227	265	208	171	282	292	206	207	100	133	109	258	128	238	275	274	294	124	151
EL PASO, TEXAS	77	78	14	58	54	64	8	50	56	76	79	8	42	53		345	98	57	86	48	71	285	62	97	46	33	68	92	61	69	62	290	59	57	335	298	327	64	75
HELENA, MONTANA	112	116	85	84	88	100	133	97	93	108	134	141	105	92	162		136	101	115	115	122	203	105	119	94	91	111	127	89	98	92	180	94	109	179	224	283	95	104
HOUSTON, TEXAS	64	60	348	50	40	49	329	25	39	67	338	325	6	34	285	327		34	84	3	26	288	40	103	22	5	46	86	52	60	53	289	45	24	314	297	319	5	68
INDIANAPOLIS, IND.	166	185	308	72	58	110	281	332	62	143	234	276	290	41	250	298	220		157	267	226	267	168	158	338	316	188	199	80	107	85	261	80	251	281	277	298	94	127
JACKSONVILLE, FLA.	327	309	324	33	9	1	308	339	0	8	286	304	323	355	282	314	273	340		314	300	288	338	163	341	332	326	271	29	34	28	287	8	323	303	295	312	23	39
KANSAS CITY, MO.	120	129	332	72	67	90	288	60	73	111	196	278	15	66	236	306	184	82	126		157	262	95	134	50	9	113	157	78	93	81	253	79	97	282	275	302	85	105
LITTLE ROCK, ARK.	97	104	335	59	48	65	307	26	48	92	243	300	352	41	260	315	208	43	114	338		276	55	128	21	356	71	158	62	76	64	271	56	22	297	286	309	67	89
LOS ANGELES, CALIF.	81	82	41	62	61	70	52	62	65	79	88	57	60	62	100	19	96	67	87	67	81		70	94	59	52	75	92	65	71	66	95	67	69	35	319	348	68	78
LOUISVILLE, KY.	166	190	313	66	47	87	287	339	43	137	242	282	301	26	256	302	227	348	156	280	239	271		158	342	322	202	205	71	98	75	266	63	278	285	281	301	82	120
MIAMI, FLORIDA	337	326	329	22	3	355	313	342	356	355	302	310	329	353	291	318	290	342	345	321	315	293	341		342	335	334	298	18	16	15	293	1	330	308	299	315	11	13
MILWAUKEE, WIS.	162	175	297	87	88	132	267	170	107	147	218	261	253	99	239	290	207	157	156	235	204	259	160	157		298	172	188	98	121	103	251	111	203	271	270	293	113	135
MINNEAPOLIS, MINN.	145	154	291	91	96	123	248	125	108	135	193	242	184	105	227	283	186	132	144	189	175	248	137	146	114		148	169	99	116	104	237	110	159	259	261	287	111	127
NASHVILLE, TENN.	140	180	320	59	40	61	295	354	36	114	251	290	318	24	261	307	231	8	142	298	254	275	22	150	353	333		205	63	83	65	271	50	313	291	285	305	68	103
NEW ORLEANS, LA.	50	37	337	46	32	38	318	9	28	60	299	313	347	22	283	321	270	17	86	339	339	288	22	114	7	351	23		46	56	47	287	35	359	308	296	315	47	64
NEW YORK, N. Y.	233	240	296	54	303	251	281	280	223	255	278	280	286	262	294	244	269	213	271	253	274	259	202	287	293	251	237		205	229	269	269	266	283	282	297	235	208	
NORFOLK, VA.	249	253	306	35	342	291	290	303	319	236	264	286	295	318	268	301	253	294	217	285	267	279	284	198	308	307	269	244	25		16	274	322	284	289	286	302	343	208
PHILADELPHIA, PA.	233	240	298	52	317	255	283	285	289	221	255	279	283	294	263	296	246	273	212	273	255	275	263	199	292	296	252	235	49	197		270	279	269	284	282	298	235	203
PHOENIX, ARIZONA	80	83	29	61	59	69	35	58	62	79	89	40	55	59	108	0	100	64	89	62	80	277	70	97	55	45	74	93	64	72	66		64	66	1	300	334	68	79
PITTSBURGH, PA.	210	221	300	72	18	213	280	286	308	188	246	276	281	310	257	295	235	264	189	268	244	271	246	181	296	299	234	222	85	140	96	265		261	281	279	297	123	165
ST. LOUIS, MO.	134	150	320	70	60	90	287	30	63	119	224	280	319	53	248	303	207	68	137	280	204	267	94	143	20	342	130	179	75	95	79	260	74		284	278	301	84	110
SALT LAKE CITY, UTAH	99	101	50	73	74	86	83	79	78	95	118	98	80	76	152	359	123	84	103	91	104	220	88	109	75	67	95	114	78	86	80	181	80	90		254	315	83	92
SAN FRANCISCO, CALIF.	86	86	54	66	67	75	70	70	70	83	96	75	70	68	109	39	101	73	90	77	88	136	77	96	67	62	81	97	69	76	71	114	71	77	66		1	73	81
SEATTLE, WASHINGTON	103	105	87	81	84	94	111	92	89	100	118	116	97	88	136	96	120	95	105	103	109	165	97	109	90	88	102	114	85	92	87	147	89	100	128	181		90	97
WASHINGTON, D. C.	233	240	302	52	342	263	285	293	307	215	256	281	287	308	263	298	245	280	205	277	257	278	268	192	300	302	254	235	53	163	53	270	305	273	285	283	300		18

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HT - NICARAGUA

To commemorate their 25th anniversary,
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IRØ - ITALY

To commemorate the 1,000th anniversary of
Rome as the capital of Italy,
II stations will use the prefix IRØ.

YT - YUGOSLAVIA

To commemorate the 25th anniversary of
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WORLD TIME CONVERSION CHART IN HOURS

Greenwich Meridian Time, London, Eng- land.	Central Europe, Ber- lin, Geneva, Stock- holm, Vienna.	Eastern Europe, Ath- ens, Cape Town, Cairo, Moscow	Arabia, Armenia, Ethiopia, Madagas- car.	Mauritius, Iran, Reunion Island.	Central Russia, Bom- bay, India.	Calcutta, Novosi- birsk Russia, Tibet.	Sumatra, Thailand, Laos.	Philippines, Perth, Australia	Central Australia, Tokyo, Japan.	Eastern Australia, Melbourne, Sydney.	New Caledonia, New Zealand.	International Date Line, Fiji Islands.	Norfolk, Alaska, Samoa Islands.	Hawaii, Midway Islands.	Eastern Alaska, Dawson.	Pacific Standard Time, Los Angeles, Seattle, Juneau.	Mountain Standard Time, Calgary, Denver, Phoenix.	Central Standard Time, Chicago, Costa Rica.	Eastern Standard Time, Montreal, New York, Peru.	Atlantic Standard Time, Argentina, Nova Scotia.	Greenland, Rio de Janeiro, Brazil.	Azores.	Iceland, Canary Islands.
0000	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM
0100	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night
0200	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM
0300	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM
0400	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM
0500	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM
0600	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM
0700	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM
0800	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM
0900	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM
1000	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM
1100	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM
1200	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM
1300	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon
1400	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM
1500	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM
1600	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM
1700	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM
1800	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM
1900	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM
2000	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM
2100	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
2200	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM
2300	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM

With this chart you can convert standard time in any time zone to GMT or tell what time it is in other parts of the world. To correctly use this chart visualize each horizontal line as a complete circle. From your time zone tracing horizontally to the right (Counter Clockwise) it will be tomorrow when you pass midnight and yesterday when you pass the international date line. To the left (Clockwise) it will be yesterday when you pass midnight and tomorrow when you pass the international date line. There is no change in date when you pass both midnight and the international date line going in one direction. For instance at 8 PM in New York Eastern Standard Time it is 2 AM tomorrow in Berlin, Germany and 11 AM tomorrow in Sydney, Australia. Always trace in the shortest direction from your time zone to find what time it is in any other zone.

INTERNATIONAL POSTAL RATES

The following postal rates cover QSL cards, first class letters and air mail letters from the United States to Countries outside of the United States and Possessions.

FIRST CLASS RATES are the rate for the first ounce. If the rate indicated is 13¢, add 8¢ for each additional ounce or fraction; if the rate indicated is 6¢ add 6¢ for each additional ounce or fraction.

AIR MAIL RATES are the rate for each half ounce, except where indicated.

QSL CARDS and AEROGRAMMES (air letter sheets) may be sent to any country in the world by air mail for 13¢ (exception: to Canada and Mexico, QSL cards are 8¢ by air mail).

INTERNATIONAL REPLY COUPONS of United States issue may be purchased at United States post offices for 15¢ each. Each coupon is exchangeable at a post office in any country for a stamp or stamps representing the international postage on a single rate surface letter. The column marked "(Air) IRC" indicates the number of international reply coupons required to prepay an air mail letter of the first weight unit from the countries indicated to the United States.

These rates include all revisions up to press time of this issue.

	QSL cards	First class	Air mail	(Air) IRC		QSL cards	First class	Air mail	(Air) IRC		QSL cards	First class	Air mail	(Air) IRC
Afghanistan.....	.08	.13	.25	5	Great Britain.....	.08	.13	.20	2	Pakistan.....	.08	.13	.25	2
Aland Is. (Finland).....	.08	.13	.20	2	Groce (incl. Crete).....	.08	.13	.20	2	Panama.....	.08	.13	.15	2
Albania.....	.08	.13	.20	4	Greenland (Denmark).....	.08	.13	.20	2	Papua Territory (Australia).....	.08	.13	.25	3
Algeria.....	.08	.13	.20	2	Grenada & Grenadines.....	.08	.13	.15	5	Paraguay.....	.08	.13	.15	3
Andorra.....	.08	.13	.20	2	Guadeloupe Is.....	.08	.13	.15	2	Persian Gulf Ports.....	.08	.13	.25	4
Angola.....	.08	.13	.25	3	Guatemala.....	.08	.13	.15	2	Peru.....	.08	.13	.15	3
Argentina.....	.08	.13	.15	3	Guiana, French.....	.08	.13	.15	2	Philippines.....	.08	.13	.25	3
Ascension Is. (Great Britain).....	.08	.13	.15	3	Guinea, Portuguese.....	.08	.13	.25	2	Pitcairn Is. (Great Britain).....	.08	.13	.25	
Australia.....	.08	.13	.25	4	Guinea, Republic of.....	.08	.13	.25	2	Poland.....	.08	.13	.20	2
Austria.....	.08	.13	.20	2	Guyana.....	.08	.13	.15	3	Portugal.....	.08	.13	.20	2
Azores Is. (Portugal).....	.08	.13	.20	2										
					Haiti.....	.08	.13	.15	5	Qatar.....	.08	.13	.25	4
Bahama Is. (Great Britain).....	.08	.13	.15		Honduras.....	.08	.13	.15	3	Reunion Is. (France).....	.08	.13	.25	2
Balearic Is. (Spain).....	.08	.13	.20	2	Honduras, British.....	.08	.13	.15	2	Rhodesia.....	.08	.13	.25	5
Barbados Is. (West Indies).....	.08	.13	.15	3	Hong Kong.....	.08	.13	.25	5	Romania.....	.08	.13	.20	3
Belgium.....	.08	.13	.20	2	Hungary.....	.08	.13	.20	2	Rwanda.....	.08	.13	.25	2
Bermuda Is.....	.08	.13	.15	3						Ryukyu Is.....	.08	.13	.25	
Bhutan.....	.08	.13	.25		Iceland.....	.08	.13	.20	2					
Bolivia.....	.08	.13	.15	2	India.....	.08	.13	.25	3	St. Helena Is. (Great Britain).....	.08	.13	.25	3
Botswana.....	.08	.13	.25	5	Indonesia.....	.08	.13	.25		St. Pierre and Miquelon Is. (Fr.).....	.08	.13	.15	2
Brazil.....	.08	.13	.15	2	Iran.....	.08	.13	.25	4	Samoa, Western (Great Britain).....	.08	.13	.25	4
Brunei.....	.08	.13	.25	7	Iraq.....	.08	.13	.25	3	Saudi Arabia.....	.08	.13	.25	3
Bulgaria.....	.08	.13	.20	3	Ireland (Eire).....	.08	.13	.20	2	Senegal.....	.08	.13	.25	2
Burma.....	.08	.13	.25	4	Israel.....	.08	.13	.25	3	Seychelles Is. (Great Britain).....	.08	.13	.25	3
Burundi.....	.08	.13	.25	3	Italy.....	.08	.13	.20	2	Sierra Leone.....	.08	.13	.25	3
					Ivory Coast.....	.08	.13	.25	2	Solomon Is. (Great Britain).....	.08	.13	.25	5
Cambodia.....	.08	.13	.25	3						Somali Republic.....	.08	.13	.25	
Cameroon.....	.08	.13	.25	2	Jamaica.....	.08	.13	.15	2	South Africa.....	.08	.13	.25	5
Canada.....	.05	.06	.10*	2	Japan.....	.08	.13	.25	2	South-West Africa (Namibia).....	.08	.13	.25	5
Canary Is. (Spain).....	.08	.13	.20	2	Jordan.....	.08	.13	.25	3	South Yemen.....	.08	.13	.25	5
Cape Verde Is. (Portugal).....	.08	.13	.25	3						Spain.....	.08	.13	.20	2
Cayman Is. (West Indies).....	.08	.13	.15	3	Kenya.....	.08	.13	.25	5	Spanish West Africa.....	.08	.13	.25	2
Central African Republic.....	.08	.13	.25	2	Korea.....	.08	.13	.25	3	Sudan.....	.08	.13	.25	3
Ceylon.....	.08	.13	.25	5	Kuwait.....	.08	.13	.25	4	Surinam.....	.08	.13	.15	1
Chad.....	.08	.13	.25	2						Swaziland.....	.08	.13	.25	5
Chile.....	.08	.13	.15		Laos.....	.08	.13	.25		Sweden.....	.08	.13	.20	
China (Taiwan).....	.08	.13	.25	3	Lebanon.....	.08	.13	.25	3	Switzerland.....	.08	.13	.20	2
China (Mainland).....	.08	.13	.25	3	Leeward Is. (West Indies).....	.08	.13	.15	3	Syria.....	.08	.13	.25	3
Colombia.....	.08	.13	.15	3	Lesotho.....	.08	.13	.25	5					
Comoro Is. (France).....	.08	.13	.25	3	Liberia.....	.08	.13	.25	5	Tanzania.....	.08	.13	.25	5
Congo (Brazzaville).....	.08	.13	.25	2	Libya.....	.08	.13	.20	2	Tasmania (Australia).....	.08	.13	.25	4
Congo (Kinshasa).....	.08	.13	.25		Liechtenstein.....	.08	.13	.20	2	Thailand.....	.08	.13	.25	3
Cook Is. (New Zealand).....	.08	.13	.25	3	Luxembourg.....	.08	.13	.20	2	Timor (Portugal).....	.08	.13	.25	4
Corsica (France).....	.08	.13	.20	2						Togo.....	.08	.13	.25	2
Costa Rica.....	.08	.13	.15	2	Macao (Portugal).....	.08	.13	.25	3	Tonga Is. (Great Britain).....	.08	.13	.25	3
Cuba.....	.08	.13	.15	4	Madeira Is. (Portugal).....	.08	.13	.20	2	Trinidad and Tobago Is. (Britain).....	.08	.13	.15	2
Cyprus.....	.08	.13	.25	4	Malagasy Republic (Madagascar).....	.08	.13	.25	3	Tristan de Cunha & Gough Is.....	.08	.13	.25	5
Czechoslovakia.....	.08	.13	.20	2	Malawi.....	.08	.13	.25	6	Tunisia.....	.08	.13	.20	2
					Malaysia.....	.08	.13	.25	5	Turkey.....	.08	.13	.20	3
Dahomey.....	.08	.13	.25	2	Maldives Is.....	.08	.13	.25	5	Turks & Caicos Is. (Great Britain).....	.08	.13	.15	2
Denmark.....	.08	.13	.20	2	Mali Republic.....	.08	.13	.25	2					
Dominican Republic.....	.08	.13	.15	2	Malta (Great Britain).....	.08	.13	.20	3	Uganda.....	.08	.13	.25	5
					Martinique (France).....	.08	.13	.15	2	United States of America - Domestic rates only.....	.05	.06	.10*	
Ecuador.....	.08	.13	.15	3	Mauritania.....	.08	.13	.25	2	U. S. S. R.....	.08	.13	.25	
Egypt (United Arab Republic).....	.08	.13	.20	2	Mauritius (Great Britain).....	.08	.13	.25	3	Upper Volta.....	.08	.13	.25	2
El Salvador.....	.08	.13	.15	2	Mexico.....	.05	.06	.10*	2	Uruguay.....	.08	.13	.15	4
Ethiopia.....	.08	.13	.25	3	Morocco.....	.08	.13	.20	2					
					Mozambique.....	.08	.13	.25	3	Vatican City.....	.08	.13	.20	2
Faeroe Is. (Denmark).....	.08	.13	.20	2	Muscat and Oman.....	.08	.13	.25	4	Venezuela.....	.08	.13	.15	2
Falkland Is. (Great Britain).....	.08	.13	.20	3						Vietnam.....	.08	.13	.25	2
Fiji Is. (Great Britain).....	.08	.13	.25	4	Nauru Is.....	.08	.13	.25	3	Virgin Is. (British).....	.08	.13	.15	2
Finland.....	.08	.13	.20	2	Nepal.....	.08	.13	.25	5					
France.....	.08	.13	.20	2	Netherlands.....	.08	.13	.20	2	West Irian (Indonesia).....	.08	.13	.25	
French Polynesia Is.....	.08	.13	.25	2	Netherlands Antilles.....	.08	.13	.15	1	Windward Is. (West Indies).....	.08	.13	.15	2
French Somaliland.....	.08	.13	.25	2	New Caledonia (France).....	.08	.13	.25	2					
					New Guinea, N.E. (Australia).....	.08	.13	.25	3	Yemen.....	.08	.13	.25	
Gabon.....	.08	.13	.25	2	New Hebrides Is.....	.08	.13	.25	2	Yugoslavia.....	.08	.13	.20	3
Gambia.....	.08	.13	.25	4	New Zealand.....	.08	.13	.25	3					
Germany, Western Zone.....	.08	.13	.20	2	Nicaragua.....	.08	.13	.15	4	Zambia.....	.08	.13	.25	5
Germany, Eastern Zone.....	.08	.13	.20	2	Niger.....	.08	.13	.25	2	Zanzibar.....	.08	.13	.25	5
Ghana.....	.08	.13	.25	3	Nigeria.....	.08	.13	.25	3					
Gibraltar (Great Britain).....	.08	.13	.20	2	Northern Ireland.....	.08	.13	.20	2					
Gilbert and Ellice Is.....	.08	.13	.25	5	Norway.....	.08	.13	.20	2					

* Rate per ounce or fraction

THE GEOGRAPHICAL CENTER OF THE UNITED STATES

The table below shows the great circle bearing in degrees from the point indicated above to countries throughout the world having licensed radio amateurs. Where cities are shown the bearing to the nearest degree is given. These bearings were compiled from information supplied by the U. S. Coast and Geodetic Survey.

PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING
A2C	BOTSWANA, MAPEKING	91	KS4	SWAN IS.	146	VQ8	CHAGOS IS.	17
AC3	SIKKIM	353	KS6	U. S. SAMOA	248		MAURITIUS & RODRIGUEZ IS.	53
AC4	TIBET, LHASA	351	KV4	VIRGIN IS.	117	VQ9	SEYCHELLES IS.	40
AG5	BHUTAN	351	KW6	WAKE IS.	288	VR1	GILBERT, ELLICE & OGLAN IS.	270
AP	PAKISTAN, KARACHI	14	KX6	MARSHALL IS.	280	VR2	FIJI IS.	252
AV	TAIWAN, TAIPEI	323	KZ5	CANAL ZONE	145	VR3	FANNING & LINE IS.	253
BY	CHINA, CHUNGKING	337	LA	NORWAY, OSLO	32	VR4	SOLOMON IS.	270
	PEKING	334		SVALBARD IS.	13	VR5	TONGA IS.	245
	SHANGHAI	326		JAN MAYEN IS.	24	VR6	PITCAIRN IS.	210
CE	CHILE, SANTIAGO	156	LU	ARGENTINA, BUENOS AIRES	148	V55	BRUNEI	317
CE0A	EASTER IS.	190	EX	LUXEMBOURG	42	V56	HONG KONG	328
CE0Z	JUAN FERNANDEZ IS.	163	LZ	BULGARIA, SOFIA	39	VU	INDIA, BOMBAY	9
CM,CO	CUBA, HAVANA	136	M1	SAN MARINO	44		CALCUTTA	353
CN	MORRISCO, CASABLANCA	62	MP4	MUSCAT & OMAN, MUSCAT	23		NEW DELHI	4
CP	BOLIVIA, LA PAZ	147	OA	PERU, LIMA	154	VU4	LACCADIVE IS.	10
CR3	PORTUGUESE GUINEA	85	OD5	LEBANON, BEIRUT	37	VU5	ANDAMAN & NICOBAR IS.	346
CR4	CAPE VERDE IS.	87	OE	AUSTRIA, VIENNA	39	XF, XF	MEXICO, MEXICO CITY	162
CR6	ANGOLA, NOVA LISBOA	84	OH	FINLAND, HELSINKI	26	XL4	REVILLAGIGEDO IS.	211
CR7	MOZAMBIQUE, LUORINGO MARQUES	86	OH0	ALAND IS.	28	XW8	LAOS	338
	MOZAMBIQUE	67	OK,OL	CZECHOSLOVAKIA, PRAGUE	38	XZ	BURMA, RANGOON	343
CR8	GOA	9	ON	BELGIUM, BRUSSELS	42	YA	AFGHANISTAN, KANDAHAR	14
CR8	TIMOR, IS.	296	UX	GREENLAND, GODTHAAB	32	YI	IRAQ, BAGHDAD	31
CR9	MACAU	328	OY	FAEROES IS.	35	YJ	NEW HEBRIDES, VILLA	261
CT1	PORTUGAL, LISBON	59	OZ	DENMARK, COPENHAGEN	34	YK	SYRIA	34
CT2	AZORES IS.	67	PA,PE,PI	NETHERLANDS, AMSTERDAM	40	YN	NICARAGUA, MANAGUA	155
CT3	MADEIRA IS.	68	PJ	NETHERLANDS ANTILLES	128	YU	ROMANIA, BUCHAREST	36
CX	URUGUAY, MONTEVIDEO	146	PJ2M	SINT MAARTEN	115	YS	EL SALVADOR, SAN SALVADOR	160
DC,DJ,DK	WEST GERMAN FEDERAL REP, BONN	41	PX1	ANDORRA	50	YU	YUGOSLAVIA, BELGRADE	39
DM	E. GERMAN DEMOCRATIC REP, BERLIN	37	PY	BRAZIL, BRAVILIA	129	YV	VENEZUELA, CARACAS	127
DU	PHILIPPINES, MANILA	317		RIO DE JANEIRO	130	ZA	ALBANIA, TIRANA	42
EA	SPAIN, MADRID	55		NATAL	112	ZB2	GIBRALTAR	59
EA6	BALEARIC IS.	53	PY8	TRINIDADE & MARTIN VAZ IS.	118	ZC4	CYPRUS	38
EA8	CANARY IS.	70	PZ	SURINAM	119	ZD3	GAMBIA	85
EA9	SPANISH SAHARA	70	SK,SL,SM	SWEDEN, STOCKHOLM	29	ZD5	SWAZILAND	88
EA0	RIO MUNE	75	SP	POLAND, WARSAW	34	ZD7	SAINT HELENA	101
E1	IRELAND, DUBLIN	43	ST	SUDAN, KHARTOUM	50	ZD8	ASCENSION IS.	100
E1,51	LIBERIA, MONROVIA	87	SU	EGYPT, CAIRO	42	ZD9	TRISTAN DA CUNHA & GOUCH IS.	122
EP	IRAN, TEHRAN	24	SV	GREECE, ATHENS	42	ZE	SOUTHERN RHODESIA, SALISBURY	78
ET3	ETHIOPIA, ADDIS ABABA	49	SV5	DUTCH GUAYANA IS.	41	ZK1	COOK IS.	235
	ASMAKA	45	TA,TC	TURKEY, ANKARA	35	ZK2	NIOE IS.	244
F	FRANCE, PARIS	44	TF	ICELAND, REYKJAVIK	34	ZL1	NEW ZEALAND, AUCKLAND	238
Fbd	AMSTERDAM AND ST. PAUL IS.	58	TG	GUATEMALA, GUATEMALA CITY	162	ZL2	WELLINGTON	235
	KERGUELEN IS.	143	TI	COSTA RICA	153	ZL3	CHRISTCHURCH	233
FC	CURSCA	47	TJ	CAMEROON, YAOUNDE	74	ZL4	DUNEDIN	232
FG7	GUADALOUPE	116	TL4	CENTRAL AFRICAN REP, BANGUI	68	ZP	PARAGUAY, ASUNCION	142
FH8	CUMORU IS.	61	TN8	REPUBLIC OF CONGO, BRAZZAVILLE	78	Z5	SOUTH AFRICA, CAPE TOWN	104
FH6	NEW CALIDONIA, NOUMEA	255	TR8	GABON, LIBREVILLE	78		DURBAN	92
FL8	FRENCH SOMALILAND, DJIBOUTI	43	TR8	CHAD, FT. LAMY	95		JOHANNESBURG	90
FM7	MARTINIQUE	117	TU2	IVORY COAST, ABIDJAN	63	Z52	PRINCE EDWARD & MARKIS IS.	117
FJ8	FRENCH POLYNESIA, TAHITI	230	TZ	MALI REPUBLIC, BAMAKO	80	Z53	SOUTH-WEST AFRICA, WINDHOUK	93
	CLIPPERTON IS.	63	UA1	SOVIET UNION, MOSCOW	73	3A	MONACO	47
FPR	ST. PIERRE & MIQUELON IS.	58	UA9,V	ASIATIC RUSSIAN S.S.R.	346	3VB	TUNISIA, TUNIS	50
FR7	REUNION IS.	63	UB5	UKRAINIAN S.S.R.	30	3W8	VIEINAM, SAIGON	329
FZ7	SAINT MARTIN IS.	115	UC2	WHITE RUSSIAN S.S.R.	30	457	CEYLON, COLOMBO	2
FZ8	NEW HEBRIDES, VILA	258	UD6	AZERBAIDZHAN S.S.R.	26	4X1	YEMEN	40
FZ6	WALLIS & FUTUNA IS.	252	UF6	GEORGIAN S.S.R.	26	4X4,4Z4	ISRAEL	38
FZ7	FRENCH GUIANA, CAYENNE	118	UG6	ARMENIAN S.S.R.	27	5A	LIBYA, TRIPOLI	52
G	ENGLAND, LONDON	43	UH8	TURKISH S.S.R.	18	5H3	TANZANIA, DAR ES SALAAM	60
GC	CHANNEL IS.	46	UI8	UZBEK S.S.R.	11	5N2	NIGERIA, LAGOS	77
GD	ISLE OF MAN	42	UJ8	TADZHIK S.S.R.	10	5R8	MALAGASY REPUBLIC, TANANARIVE	64
GI	NORTHERN IRELAND, BELFAST	42	UL7	KAZAKH S.S.R.	13	5T5	MAURITANIA, NOUAKCHOTT	80
GM	SCOTLAND, GLASGOW	40	UM8	KIRGHIZ S.S.R.	5	5U7	NIGER, NIAMEY	73
GW	WALES	44	UN1	KARELO-FINNISH S.S.R.	19	5V	TUGO	79
HA,HG	HUNGARY, BUDAPEST	38	UD5	MOLDAVIAN S.S.R.	33	5W1	WESTERN SAMOA	249
HB	SWITZERLAND, BERN	44	UP	LITHUANIAN S.S.R.	30	5X5	UGANDA	60
HB0	LICHTENSTEIN	43	UQ	LAIVIAN S.S.R.	29	5Z4	KENYA, NAIROBI	58
HC	ECUADOR, QUITO	150	UR	ESTONIAN S.S.R.	27	60	SOMALI REPUBLIC, MUGADISHU	47
HG8	GALAPAGOS IS.	166	VE1	CANADA, HALIFAX	68	6W8	SENEGAL, DAKAR	84
HH	HAITI, PORT-AU-PRINCE	126	VE2	MONTREAL	65	6Y5	JAMAICA	133
HI	DOMINICAN REP, SANTO DOMINGO	122	VE3	TORONTO	69	7G1	REPUBLIC OF GUINEA, CONAKRY	86
HK	COLUMBIA, BOGOTA	141	VE4	WINNIPEG	5	7D	SOUTH YEMEN, ADEN	41
HK0	SAN ANDRES & PROVIDENCIA IS.	146	VE5	SASKATOON	338	7P8	LESOTHO	94
HM,HL9	KORIA, SLOU	325	VE6	EDMONTON	329	7Q7	MALAWI, ZUMBA	72
HP	PANAMA	146	VE7	VANCOUVER	307	7X	ALGERIA, ALGERS	54
HR	HONDURAS, TEGUCIGALPA	156	VE8	FORT NELSON	329	7Z,HZ	SAUDI ARABIA, MECCA	40
HS	THAILAND, BANGKOK	338	VK1	AUSTRALIA, CANBERRA	252	6F1,2,3	JAVA, BATAVIA	319
HV	VATICAN CITY	45	VK2	SYDNEY	253	8F4	SUMATRA	326
I	ITALY, ROME	45	VK3	MELBOURNE	251	8F5	BURNEO	312
	TRIESTE	42	VK4	BRISBANE	258	8F6	CELEBES & MOLUCCA IS.	307
IS	SARDINIA	49	VK5	ADALAIOL	257	8P6	BARBADOS	117
IT	SICILY	48	VK6	PERTH	275	8R	GUYANA, GEORGETOWN	121
JA,JH	JAPAN, TOKYO	316	VK7	TASMANIA, HOBART	244	9G1	GHANA, ACCRA	80
JT1	MONGOLIA, ULAN BATOR	343	VK8	DARWIN	288	9H1	MALTA	49
JY	JORDAN	38	VK9	NORFOLK IS.	249	9I,9J	ZAMBIA, LUSAKA	78
JZ0	WEST IRIAN	289		NEW GUINEA, PAPUA, PORT MORESBY	278	9K2	KUWAIT	30
K66	BAKER IS.	262	VK0	HEARD IS.	161	9L1	SIERRA LEONE, FREETOWN	86
KC4	NAVASSA IS.	130		MACQUARIE IS.	226	9M2	FEDERATION OF MALAYSIA	333
KC6	CARDLINE IS.	294	VU1	NEWFOUNDLAND, ST. JOHNS	61	9M6	SABAH, NORTH BORNEO	315
KC4	GUANTANAMO BAY, CUBA	128	VU2	LABRADOR, HOPEDALE	45	9M8	SARAWAK	320
KG6	MARIANAS IS., GUAM	298	VP1	BRITISH HONDURAS	155	9N1	NEPAL, KATMANDU	356
KG6I	VOLCANO IS.	308	VP2	ANTIGUA	115	9Q5	REP. OF THE CONGO, KINSHASA	78
KG6S	SAIPAN IS.	298	VP5	TURKS & CAICOS IS.	120		LUBUMBASHI	75
KH6	HAWAII, HONOLULU	268	VP7	BAHAMA IS.	123		KISANGANI	66
KL7	ALASKA, ANCHORAGE	322	VP8	FALKLAND IS.	156	9U5	BURUNDI	65
	FAIRBANKS	328		SOUTH GEORGIA IS.	147	9V1	SINGAPORE	328
KM6	MIDWAY IS.	286		SOUTH ORKNEY IS.	155	9X5	RWANDA	65
KP4	PUERTO RICO	119	VP9	BERMUDA IS.	95	9Y4	TRINIDAD & TOBAGO IS.	121
KR6,6	RYUKYU IS., OKINAWA	319	VQ1	ZANZIBAR	60			

ARRL Adopted ICAO Phonetic Alphabet

(International Civil
Aviation Organization)

A	ALFA
B	BRAVO
C	CHARLIE
D	DELTA
E	ECHO
F	FOXTROT
G	GOLF
H	HOTEL
I	INDIA
J	JULIETT
K	KILO
L	LIMA
M	MIKE
N	NOVEMBER
O	OSCAR
P	PAPA
Q	QUEBEC
R	ROMEO
S	SIERRA
T	TANGO
U	UNIFORM
V	VICTOR
W	WHISKEY
X	X-RAY
Y	YANKEE
Z	ZULU

ON GOOD PHONE OPERATING

1. Listen much . . . with care. Avoid distractions in your operating room. Tune the band well after each call.
2. Time your calls; monitor your own frequency. Call only when a station is free.
3. Make short calls, with breaks to listen. Speak clearly, at a steady, modest rate. Three short calls are better than one long one.
4. Use push-to-talk technique . . . speak near the mike. Watch the modulation indicator. Keep local background noise at a minimum.
5. Make notes. Avoid missing points for comment. Jot down topics to avoid repeats.
6. Talk in connected thoughts and phrases. Notes will help avoid mixing up subjects. Push-to-talk technique will keep brother amateurs from calling you a monologist.
7. Speak naturally. QSOs need not be cut and dried. Make them interesting. Avoid exhibitionism. Use proper operating form to promote efficiency in communication and add respect and prestige for your station.

Use of this standard list is recommended by ARRL. Haphazard selection of words often results in confusion. A degree of uniformity in use of phonetic words reflects favorably on your individual operating, and on the whole amateur service.

American Radio Relay League
225 Main Street
Newington, Conn. 06111

SPECIAL ARRL QN SIGNALS FOR NET USE

QNA*	Answer in prearranged order.
QNB*	Act as relay Between and
QNC	All net stations Copy. I have a message for all net stations.
QND*	Net is Directed (controlled by net control station).
QNE*	Entire net please stand by.
QNF	Net is Free (not controlled).
QNG	Take over as net control station.
QNH	Your net frequency is High.
QNI	Net stations report In.* I am reporting into the net.
QNJ	Can you copy me? Can you copy ?
QNK*	Transmit messages for to
QNL	Your net frequency is Low.
QNM*	You are QRMing the net. Please stand by.
QNN	Net control station is What station has net control?
QNO	Station is leaving the net.
QNP	Unable to copy you (or).
QNQ*	Move frequency to . . . and wait for . . . to finish handling traffic. Then send him traffic for
QNP*	Answer . . . and Relay (or Receive) traffic.
QNS	Following Stations are in the net.* (Follow with list). Request list of stations in the net.
QNT	Leaving net Temporarily (or for . . . minutes).
QNU*	The net has traffic for YOU. Stand by.
QNV*	Establish contact with on this frequency. If successful, move to . . . and send him traffic for
QNW	How do I route messages for ?
QNX	You are excused from the net.* Request to be excused from the net.
QNY*	Shift to another frequency (or to . . . kc.) to clear traffic with
QNZ	Zero beat your signal with mine.

*For use only by Net Control Station

Notes on the Use of QN Signals

1. The QN signals listed above are special ARRL signals for use in amateur c.w. nets only. Other meanings that may be used in other services do not apply.
2. Some QN signals are for use by net control stations only; these are marked with an asterisk (*). Others have slightly different meanings when used by the NCS and net stations; in this case, the meaning when used by the NCS is marked with an asterisk (*).
3. Some QN signals have two meanings, the difference depending on how or by whom used. Examples: (a) QNC, when used as a preface to transmission of a message, carries its first meaning; when used by a station reporting into the net (e.g., W9NCS DE W9NET QNI QNC), it carries its second meaning. (b) QNI, when used by the NCS, is a request for stations to report in; when used by a net station, it means that this station is reporting in. (c) QNU, when used alone, carries its first meaning; when followed by a call, it carries the second meaning.
4. QN signals are never followed by a question mark, even though the meaning may be interrogatory.
5. Do not use QN signals on phone nets. Say it with words.
6. Use QN signals in nets only. They are not for use in casual amateur conversation.
7. Make frequent use of standard international "Q" signals in traffic nets, for meanings not covered by QN signals. Examples: QRU, QRV, QSV, QTA, QTB, QTX, etc.

ARRL Communications Department

FEDERAL COMMUNICATIONS COMMISSION EXAMINATION POINTS

Examinations for commercial and amateur radio operator licenses are conducted at the following F.C.C. field offices on the days designated by the Engineer in Charge of each office. Specific dates should be obtained from the Engineer in Charge.

Dist. No.	Office Location
1 -	BOSTON, MASSACHUSETTS 02109 1600 Customhouse, India & State Streets
2 -	NEW YORK, NEW YORK 10014 748 Federal Building, 641 Washington Street
3 -	PHILADELPHIA, PENNSYLVANIA 19106 1005 U.S. Customhouse, 2nd & Chestnut Streets
4 -	BALTIMORE, MARYLAND 21202 415 U. S. Customhouse, Gay & Lombard Streets
5 -	NORFOLK, VIRGINIA 23510 405 Federal Building, Granby & York Streets
6 -	ATLANTA, GEORGIA 30303 2010 Atlanta Merchandise Mart, 240 Peachtree St., NE
6S -	SAVANNAH, GEORGIA 31402 238 Post Office Building, York & Bull Streets
7 -	MIAMI, FLORIDA 33130 919 Federal Building, 51 S. W. First Avenue
7T -	TAMPA, FLORIDA 33602 738 Federal Building, 500 Zack Street
8 -	NEW ORLEANS, LOUISIANA 70130 829 Federal Building South, 600 South Street
8M -	MOBILE, ALABAMA 36602 439 U. S. Court House, 113 St. Joseph Street
9 -	HOUSTON, TEXAS 77002 5636 Federal Building, 515 Rusk Avenue
9B -	BEAUMONT, TEXAS 77701 239 Federal Building, 300 Willow Street
10 -	DALLAS, TEXAS 75202 707 Thomas Building, 1314 Wood Street
11 -	LOS ANGELES, CALIFORNIA 90012 U. S. Courthouse, 312 N. Spring Street
11SD -	SAN DIEGO, CALIFORNIA 92101 Fox Theatre Building, 1245 Seventh Avenue
11SP -	SAN PEDRO, CALIFORNIA 90731 300 South Ferry Street
12 -	SAN FRANCISCO, CALIFORNIA 94111 323A Custom House, 555 Battery Street
13 -	PORTLAND, OREGON 97205 314 Multnomah Building, 319 S. W. Pine Street
14 -	SEATTLE, WASHINGTON 98104 8012 Federal Office Building, 909 First Avenue
15 -	DENVER, COLORADO 80202 504 New Customhouse, 19th bet. California & Stout St.
16 -	ST. PAUL, MINNESOTA 55102 691 Federal Building, 4th & Roberts Streets
17 -	KANSAS CITY, MISSOURI 64106 1703 Federal Building, 601 East 12th Street
18 -	CHICAGO, ILLINOIS 60604 1872 U. S. Courthouse, 219 S. Dearborn Street
19 -	DETROIT, MICHIGAN 48226 1029 Federal Building, Washington & LaFayette St.
20 -	BUFFALO, NEW YORK 14203 328 Federal Office Building, Ellicott & Swan Streets
21 -	HONOLULU, HAWAII 96808 502 Federal Building, 335 South King Street
22 -	SAN JUAN, PUERTO RICO 00903 322 U. S. Post Office & Courthouse, P.O. Box 2987
23 -	ANCHORAGE, ALASKA 99501 53 U. S. Post Office Building, 4th Av bet. F & G St.
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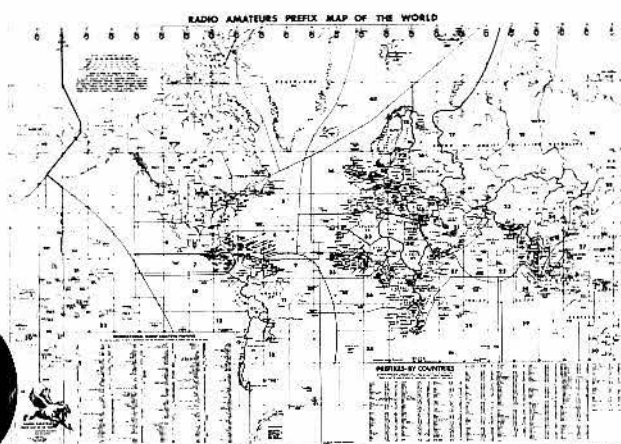
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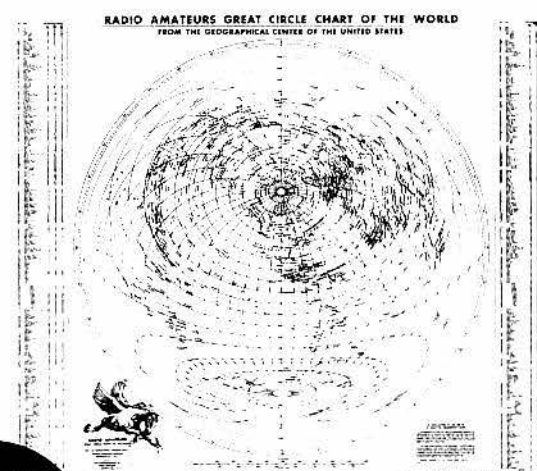
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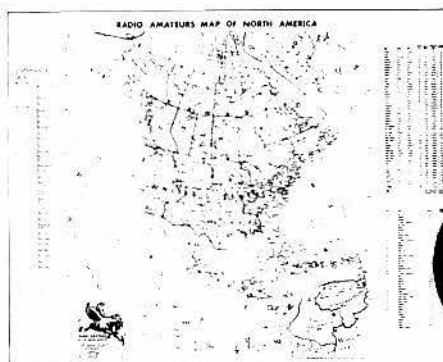
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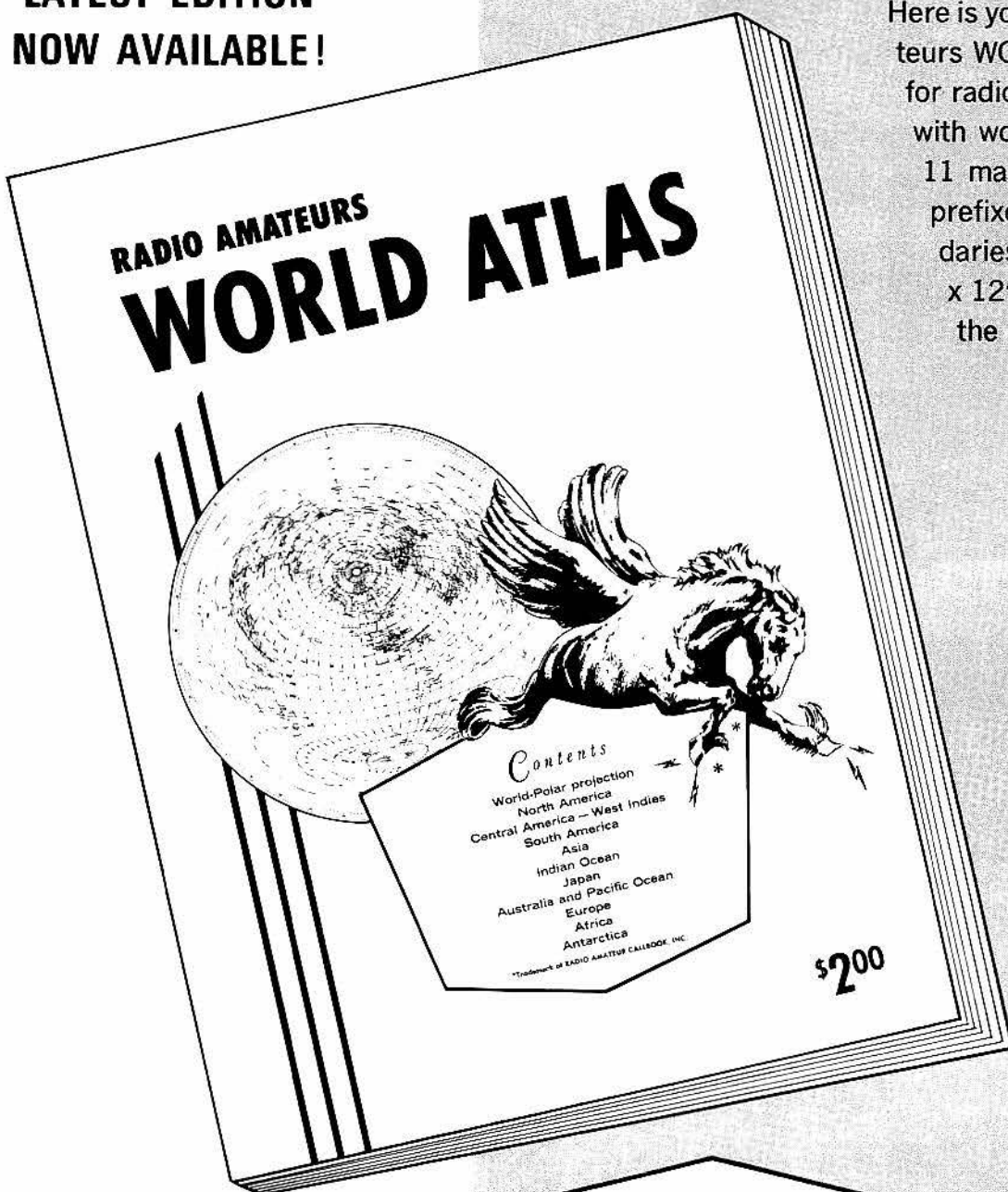
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STANDARD TIME THROUGHOUT THE WORLD

The standard time system is based on the theoretical division of the surface of the globe into 24 zones, each of 15° of longitude. The initial zone is the one which has its central meridian the Greenwich Meridian and with the meridian 7° 30' E. and 7° 30' W. as its eastern and western limits. Time in this zone is called Greenwich Mean Time, or GMT. Places to the east of Greenwich have faster time than Greenwich, while places to the west have slower time. Not all countries follow the International Time Zone System, but some use the time of some principal city as a standard and others have no standard time.

The theoretical system described is applied, in a strict sense, only in oceanic regions. On land or on groups of islands the system is applied with certain local deviations, which are rendered necessary by frontiers, convenience of an entire island group to maintain same zone time, etc. The time used in each country, whether it is the time of the corresponding zone or modified for reasons given, is an hour fixed by law and, for this reason, is called legal time, or more generally standard time.

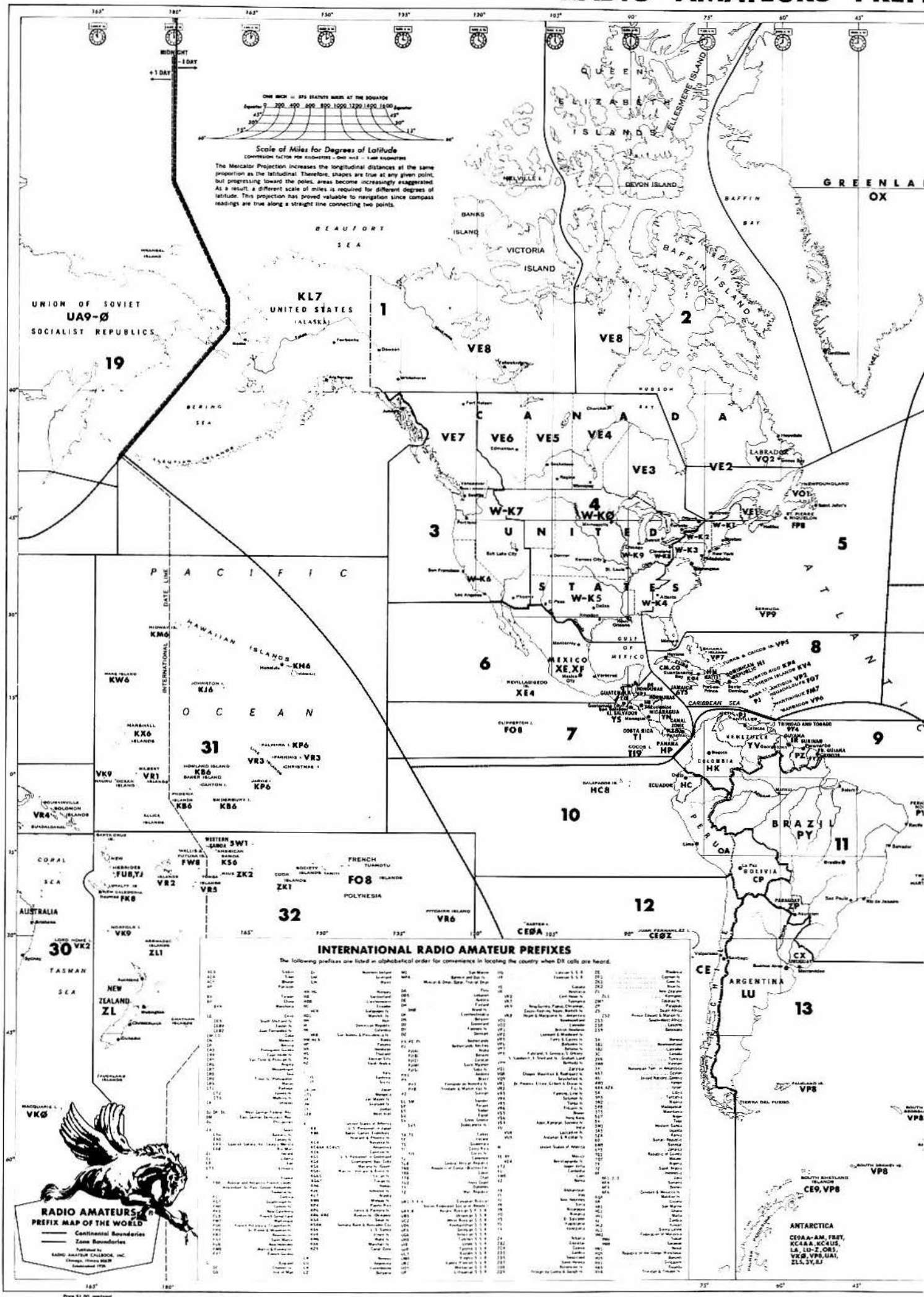
Another deviation from this theoretical system is that certain countries, for economic reasons, modify their legal time for a part of the year, especially in summer, by advancing it an hour or another fraction of time. Where such deviations are maintained on a year-round basis, the time kept is considered to be standard time.

Reference - "Standard Time Chart of the World" No. 5192, published by U. S. Navy Hydrographic Office, Washington, D. C.

Country	Standard or Local Time	Country	Standard or Local Time	Country	Standard or Local Time			
Hours fast or slow of GMT	Time at 1200 hrs. GMT	Hours fast or slow of GMT	Time at 1200 hrs. GMT	Hours fast or slow of GMT	Time at 1200 hrs. GMT			
Aden, Kamaran, Socotra Is.	+ 3	15 00	Faeroe Is.	0	12 00	Pakistan, West.	+ 5	17 00
Afghanistan	+ 4 1/2	16 30	Falkland Is.	- 4	08 00	Pakistan, East.	+ 6	18 00
Alaska, Juneau, Ketchikan, Sitka	- 8	04 00	Fanning & Line Is.	- 10	02 00	Panama	- 5	07 00
Yakutat	- 9	03 00	Fiji Is.	+ 12	24 00	Paraguay	- 4	08 00
Central part, Kodiak Is.	- 10	02 00	Finland, Aland Is.	+ 2	14 00	Peru	- 5	07 00
West coast, Aleutian Is.	- 11	01 00	France, Corsica	+ 1	13 00	Philippines	+ 8	20 00
Albania	+ 1	13 00	French Polynesia	- 10	02 00	Pitcairn Is.	- 10	02 00
Algeria	+ 1	13 00	Gabon	+ 1	13 00	Poland	+ 1	13 00
Årsheden, St. Paul, Kerguelen Is.	+ 5	17 00	Gambia	0	12 00	Portugal	+ 1	13 00
Andorra	+ 1	13 00	Germany	+ 1	13 00	Prince Edward & Marion Is.	+ 3	15 00
Angola	+ 1	13 00	Ghana	0	12 00	Puerto Rico	- 4	08 00
Argentina	- 4	08 00	Gibraltar	+ 1	13 00	Qatar	+ 4	16 00
Ascension Is., St. Helena Is.	0	12 00	Gilbert & Ellice Is.	+ 12	24 00	Reunion Is.	+ 4	16 00
Australia, Western Australia	+ 8	20 00	Goa	+ 5 1/2	17 30	Rhodesia, Southern	+ 2 1/2	14 00
Northern Territory, South Australia	+ 9 1/2	21 30	Greece, Crete, Dodecanese Is.	+ 2	14 00	Rio Muni	+ 1	13 00
New South Wales, Queensland, Victoria, Lord Howe Is., Tasmania Is.	+ 10	22 00	Greenland, western	- 4	08 00	Romania	+ 2	14 00
Austria	+ 1	13 00	Guantanamo Bay	- 5	07 00	Rwanda	+ 2	14 00
Azores Is.	- 1	11 00	Guatemala	- 6	06 00	Ryukyu Is., Okinawa	+ 9	21 00
Bahama Is.	- 5	07 00	Guinea, British	- 3 3/4	08 15	Sabah, Sarawak (Malaysia)	+ 8	20 00
Bahrain Is.	+ 4	16 00	Guinea, French	- 4	08 00	St. Pierre & Miquelon Is.	- 3	09 00
Baker, Canton, Enderbury, Howland & Phoenix Is.	- 11	01 00	Guinea, Portuguese	- 1	11 00	Sao Paulo Is.	- 11	01 00
Basutoland	+ 2	14 00	Guinea, Republic of	0	12 00	San Marino	+ 1	13 00
Belgium	+ 1	13 00	Haiti	- 5	07 00	San Time & Principe Is.	0	12 00
Bermuda Is.	- 4	08 00	Hawaii	- 10	02 00	Sarawak	+ 8	20 00
Bhutan	+ 5 1/2	17 30	Heard Is.	+ 5	17 00	Saudi Arabia	0	12 00
Bolivia	- 4	08 00	Honduras	- 6	36 00	Senegal	0	12 00
Bonin, Volcan, Mariana, Saipan, Tinian, Guam Is.	+ 10	22 00	Hong Kong	+ 8	20 00	Serrana Bank & Rincador Cay	- 5	07 00
Borneo (Indonesian)	+ 7 1/2	19 30	Hungary	+ 1	13 00	Seychelles Is.	+ 4	16 00
Brazil, Fernando Noronha, Trindade & Martin Vaz Is., East of 52°30' W. (approx.)	- 2	10 00	Iceland	- 1	11 00	Sierra Leone	0	12 00
Aracuanas, Mato Grosso	- 3	09 00	India	0	12 00	Siberia	+ 5 1/2	17 30
Acre Territory	- 4	08 00	India, Andaman & Nicobar, Lakshadweep Is.	+ 5 1/2	17 30	Singapore	+ 7 1/2	19 30
British Honduras	- 5 1/2	06 30	Iran	+ 3 1/2	15 30	South Africa	+ 11	23 00
British Isles	+ 1	13 00	Iraq	+ 3	15 00	Swaziland	+ 3	15 00
British Phoenix Is.	- 11	01 00	Ireland	+ 1	13 00	Swaziland, French	+ 3	15 00
Brunei	+ 8	20 00	Israel	+ 2	14 00	Switzerland	+ 1	13 00
Bulgaria	+ 2	14 00	Italy, Sardinia, Sicily	+ 1	13 00	Syria	+ 2	14 00
Burma	+ 6 1/2	16 30	Ivory Coast	0	12 00	South Georgia Is., South Sandwich Is.	- 2	10 00
Burundi	+ 2	14 00	Jamaica	- 5	07 00	South Shetland Is., South Orkney Is.	0	12 00
Cambodia	+ 7	19 00	Jan Mayen Is.	- 1	11 00	South-West Africa	+ 2	14 00
Cameroun	+ 1	13 00	Japan	+ 9	21 00	Sao Paulo, Bafra Is., Ceuta & Melilla	+ 1	13 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	05 30	Jarvis & Palmyra Is.	- 10	02 00	Spanish Sahara (Rio de Oro)	0	12 00
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E. of 68°W), Sable Is., Melville Peninsula (east), Ontario (E. of 90°W), Quebec (W. of 66°W), Southwestern Is., Manitoba, Ontario (W. of 90°W), Melville Peninsula (west), N.W. Territories (east)	- 4	08 00	Java (Indonesian)	+ 7 1/2	19 30	Sri Lanka	+ 6 1/2	18 30
Alberta, Saskatchewan, N.W. Territories (west)	- 5	07 00	Johnston Is.	- 11	01 00	Switzerland, east	+ 7	19 00
British Columbia, N.W. Territories (west)	- 6	06 00	Jordan	+ 2	14 00	Surinam (Netherlands Guianese)	- 3 1/2	05 30
Yukon	- 9	03 00	Korea	+ 3	15 00	Swan Is.	- 6	06 00
Arctic Is.	- 9	03 00	Koror	+ 3	15 00	Swaziland	+ 2	14 00
Cape Verde	- 5	07 00	Kuwait	+ 3	15 00	Sweden	+ 1	13 00
Canary Is.	0	12 00	Lao	+ 7	19 00	Switzerland	+ 1	13 00
Cape Verde Is.	- 2	10 00	Lebanon	+ 2	14 00	Syria	+ 2	14 00
Cambodia	+ 7	19 00	Libania	- 3 1/2	11 15	Taiwan (Formosa)	+ 8	20 00
Cameroun	+ 1	13 00	Libya	+ 2	14 00	Tanzania	+ 3	15 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	05 30	Liechtenstein	+ 1	13 00	Thailand	+ 7	19 00
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E. of 68°W), Sable Is., Melville Peninsula (east), Ontario (E. of 90°W), Quebec (W. of 66°W), Southwestern Is., Manitoba, Ontario (W. of 90°W), Melville Peninsula (west), N.W. Territories (east)	- 4	08 00	Luxembourg	+ 1	13 00	Tibet	+ 6	18 00
Alberta, Saskatchewan, N.W. Territories (west)	- 5	07 00	Macao	+ 8	20 00	Togo	0	12 00
British Columbia, N.W. Territories (west)	- 6	06 00	Madagascar	+ 11	23 00	Tokelau Is.	- 11	01 00
Yukon	- 9	03 00	Madira Is.	- 1	11 00	Tonga (Friendly Is.)	+ 12 1/3	06 20
Arctic Is.	- 9	03 00	Malagasy Republic (Madagascar Is.)	+ 3	15 00	Trinidad & Tobago	0	12 00
Cape Verde	- 2	10 00	Malawi (Nyasaland)	+ 2	14 00	Trinidad, Olan	+ 4	16 00
Canary Is.	0	12 00	Malaysia	+ 7 1/2	19 30	Turkey	+ 1	13 00
Cape Verde Is.	- 2	10 00	Maldives Is.	+ 5	17 00	Turkey	+ 2	14 00
Cambodia	+ 7	19 00	Mali Republic	0	12 00	Uganda	+ 3	15 00
Cameroun	+ 1	13 00	Malta Is.	+ 1	13 00	United States of America, Eastern time	- 5	07 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	05 30	Manchuria	+ 8	20 00	Central time	- 6	08 00
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E. of 68°W), Sable Is., Melville Peninsula (east), Ontario (E. of 90°W), Quebec (W. of 66°W), Southwestern Is., Manitoba, Ontario (W. of 90°W), Melville Peninsula (west), N.W. Territories (east)	- 4	08 00	Mamfiki Is.	- 11	01 00	Mountain time	- 7	05 00
Alberta, Saskatchewan, N.W. Territories (west)	- 5	07 00	Marshall Is., Wake Is.	+ 12	24 00	Pacific time	- 8	04 00
British Columbia, N.W. Territories (west)	- 6	06 00	Mauritania	0	12 00	Upper Volta	0	12 00
Yukon	- 9	03 00	Mauritius & Rodriguez Is.	+ 4	16 00	Uruguay	- 3	09 00
Arctic Is.	- 9	03 00	Mexico, east of states of Sonora, Sinaloa & Nayarit	- 6	06 00	U.S.S.R., Estonia, Latvia, Lithuania, Karelo-Finnish, White Russia, Ukraine, Moldavia	+ 3	15 00
Cape Verde	- 2	10 00	Somalia, Sinaloa, Nayarit, Baja California south of 23°N, Baja California south of 23°N	- 7	05 00	European Russia	+ 3	15 00
Canary Is.	0	12 00	Midway Is.	- 8	04 00	Georgia, Armenia, Azerbaijan	+ 4	16 00
Cape Verde Is.	- 2	10 00	Molucca Is. (Indonesian)	+ 8 1/2	20 30	Kazakh, Uzbek, Turkmen, Tadzhik	+ 5	17 00
Cambodia	+ 7	19 00	Monaco	+ 1	13 00	Kirghiz, West Siberian region	+ 6	18 00
Cameroun	+ 1	13 00	Mongolia	0	12 00	Africa, 52°30' to 47°30' W.	+ 7	19 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	05 30	Mozambique	+ 2	14 00	Burati, East Siberian region	+ 8	20 00
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E. of 68°W), Sable Is., Melville Peninsula (east), Ontario (E. of 90°W), Quebec (W. of 66°W), Southwestern Is., Manitoba, Ontario (W. of 90°W), Melville Peninsula (west), N.W. Territories (east)	- 4	08 00	Muscats & Omran	+ 4	16 00	Africa, 112°30' to 127°30' W.	+ 9	21 00
Alberta, Saskatchewan, N.W. Territories (west)	- 5	07 00	Nagao Is., Norfolk Is.	+ 11 1/2	23 30	Korbi Is., Sakalin Is.	+ 10	22 00
British Columbia, N.W. Territories (west)	- 6	06 00	Nauru Is.	- 5	07 00	Africa, 142°30' to 157°30' W.	+ 11	23 00
Yukon	- 9	03 00	Netherlands	+ 1	13 00	Africa, 157°30' to 172°30' W.	+ 12	24 00
Arctic Is.	- 9	03 00	Netherlands Antilles	- 4 1/2	07 30	Africa, 172°30' W. to coast	+ 13	01 00
Cape Verde	- 2	10 00	New Caledonia Is., New Hebrides Is.	+ 11	23 00	Venezuela	- 4	08 00
Canary Is.	0	12 00	New Guinea N.E., Papua	+ 10	22 00	Vietnam	+ 8	20 00
Cape Verde Is.	- 2	10 00	New Zealand, Kermadec Is.	+ 12	24 00	Wallis & Futuna Is.	+ 12	24 00
Cambodia	+ 7	19 00	Nicaragua	- 6	06 00	West Irian (Netherlands New Guinea)	+ 9 1/2	21 30
Cameroun	+ 1	13 00	Niger	+ 1	13 00	West Indies, Barbados, Trinidad, Tobago, Guadeloupe, Martinique, Leeward Is., Windward Is.	- 4	08 00
Canada, Belle Isle, Labrador, Newfoundland	- 3 1/2	05 30	Nigeria	+ 1	13 00	Yemen**	0	12 00
Anticosti Is., Cape Breton Is., Magdalen Is., New Brunswick, Nova Scotia, Prince Edward Is., Quebec (E. of 68°W), Sable Is., Melville Peninsula (east), Ontario (E. of 90°W), Quebec (W. of 66°W), Southwestern Is., Manitoba, Ontario (W. of 90°W), Melville Peninsula (west), N.W. Territories (east)	- 4	08 00	Niue & Anikak Is.	- 11 1/3	00 40	Yugoslavia	+ 1	13 00
Alberta, Saskatchewan, N.W. Territories (west)	- 5	07 00	Norway, Svalbard Is.	+ 1	13 00	Zambia (Northern Rhodesia)	+ 2	14 00
British Columbia, N.W. Territories (west)	- 6	06 00				Zanzibar Is.	+ 3	15 00
Yukon	- 9	03 00						

^a No definite standard time used.

* "Arabic Time", i.e. daily all watches are set to midnight at sundown.





Characteristics: 1 - Designates the continent and zone in which the country is located. Abbreviations are as follows: A - Asia, E - Africa, E - Europe, NA - North America, O - Oceania, SA - South America.

[illegible]

INTERNATIONAL "Q" SIGNALS

Abbreviation	Question	Answer or Advice	Abbreviation	Question	Answer or Advice
QRA	What is the name of your station?	The name of my stations is . . .	QSD	Is my keying defective?	Your keying is defective.
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles (or kilometres)	QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time.
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .	QSH	What is the charge to be collected per word to . . . including your internal telegraph charge?	The charge to be collected per word to . . . including my internal telegraph charge is . . . francs.
QRC	Will you tell me my exact frequency or that of . . . ?	Your exact frequency (or that of . . . is . . . kc/s (or Mc/s).	QSI	Can you hear me between your signals?	I can hear you between my signals.
QRH	Does my frequency vary?	Your frequency varies.	QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QRI	How is the tone of my transmission?	The tone of your transmission is . . . (1. Good; 2. Variable; 3. Bad).	QSM	Shall I repeat the last telegram which I sent you, or some previous telegram?	Repeat the last telegram which you sent me [or telegram(s) number(s) . . .].
QRK	What is the readability of my signals (or those of . . .)?	The readability of your signals (or those of . . .) is . . . (1. Unreadable; 2. Readable now and then; 3. Readable, but with difficulty; 4. Readable; 5. Perfectly readable).	QSN	Did you hear me [or . . . (call sign)] on . . . kc/s (or Mc/s)?	I did hear you [or . . . (call sign) on . . . kc/s (or Mc/s).
QRL	Are you busy?	I am busy (or I am busy with . . .). Please do not interfere.	QSO	Can you communicate with . . . direct or by relay?	I can communicate with . . . direct (or by relay through . . .).
QRM	Are you being interfered with?	I am being interfered with.	QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.
QRN	Are you troubled by static?	I am troubled by static.	QSQ	Have you a doctor on board [or is . . . (name of person) on board]?	I have a doctor on board [or . . . name of person) is on board].
QRO	Shall I increase power?	Increase power.	QSU	Shall I send or reply on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .]?	Send or reply on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .].
QRP	Shall I decrease power?	Decrease power.	QSV	Shall I send a series of V's on this frequency [or . . . kc/s (or Mc/s)]?	Send a series of V's on this frequency [or . . . kc/s (or Mc/s)].
QRQ	Shall I send faster?	Send faster (. . . words per minute).	QSW	Will you send on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .]?	I am going to send on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .].
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at . . . words per minute.			
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).			
QRT	Shall I stop sending?	Stop sending.			
QRU	Have you anything for me?	I have nothing for you.			
QRV	Are you ready?	I am ready.			
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s).	Please inform . . . that I am calling him on . . . kc/s (or Mc/s).			
QRX	When will you call me again?	I will call you again at . . . hours [on . . . kc/s (or Mc/s)].			
QRX	What is my turn?	Your turn is Number . . . (Relates to communication.)			
QRZ	Who is calling me?	You are being called by . . . [on . . . kc/s or Mc/s)].			
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . (1. Scarcely perceptible; 2. Weak; 3. Fairly good; 4. Good; 5. Very good).			
QSB	Are my signals fading?	Your signals are fading.			
QSD	Is my keying defective?	Your keying is defective.			
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time.			
QSH	What is the charge to be collected per word to . . . including your internal telegraph charge?	The charge to be collected per word to . . . including my internal telegraph charge is . . . francs.			
QSI	Can you hear me between your signals?	I can hear you between my signals.			
QSL	Can you acknowledge receipt?	I am acknowledging receipt.			
QSM	Shall I repeat the last telegram which I sent you, or some previous telegram?	Repeat the last telegram which you sent me [or telegram(s) number(s) . . .].			
QSN	Did you hear me [or . . . (call sign)] on . . . kc/s (or Mc/s)?	I did hear you [or . . . (call sign) on . . . kc/s (or Mc/s).			
QSO	Can you communicate with . . . direct or by relay?	I can communicate with . . . direct (or by relay through . . .).			
QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.			
QSQ	Have you a doctor on board [or is . . . (name of person) on board]?	I have a doctor on board [or . . . name of person) is on board].			
QSU	Shall I send or reply on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .]?	Send or reply on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .].			
QSV	Shall I send a series of V's on this frequency [or . . . kc/s (or Mc/s)]?	Send a series of V's on this frequency [or . . . kc/s (or Mc/s)].			
QSW	Will you send on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .]?	I am going to send on this frequency [or on . . . kc/s (or Mc/s)] [with emissions of class . . .].			
QTX	Will you listen to . . . [call sign(s)] on . . . kc/s (or Mc/s)?	I am listening to . . . [call sign(s)] on . . . kc/s (or Mc/s).			
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency [or on . . . kc/s (or Mc/s)].			
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).			
QTA	Shall I cancel telegram number . . . as if it had not been sent?	Cancel telegram number . . . as if it had not been sent.			
QTB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.			
QTC	How many telegrams have you to send?	I have . . . telegrams for you (or for . . .).			
QTE	What is my TRUE bearing from you?	Your TRUE bearing from me is . . . degrees (at . . . hours)			
	What is my TRUE bearing from . . . (call sign)?	Your TRUE bearing from . . . (call sign) was . . . degrees (at . . . hours)			
	What is the TRUE bearing of . . . (call sign) from . . . (call sign)?	The TRUE bearing of . . . (call sign) from . . . (call sign) was . . . degrees (at . . . hours).			
QTH	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]?	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]			
	Will you request . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s)?	I have requested . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s).			
QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is . . . latitude . . . longitude (or according to any other indication).			
QTI	What is your TRUE track?	My TRUE track is . . . degrees.			
QTI	What is your speed?	My speed is . . . knots (or kilometres per hour).			
QTL	What is your TRUE heading?	My TRUE heading is . . . degrees.			
QTN	At what time did you depart from . . . (place)?	I departed from . . . (place) at . . . hours.			
QTO	Have you left dock (or port)?	I have left dock (or port)			
	Are you airborne?	I am airborne.			
QTP	Are you going to enter dock (or port)?	I am going to enter dock (or port)			
	Are you going to alight (or land)?	I am going to alight (or land).			
QTT	Can you communicate with my station by means of the International Code of Signals?	I am going to communicate with your station by means of the International Code of Signals.			
QTR	What is the correct time?	The correct time is . . . hours.			
QTS	Will you send your call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that your frequency may be measured?	I will send my call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that my frequency may be measured.			
QTT	What are the hours during which your station is open?	My station is open from . . . to . . . hours.			
QTV	Shall I stand guard for you on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours).			
QTX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours).			
QUA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).			
QUB	Can you give me, in the following order, information concerning: visibility, height of clouds, direction and velocity of ground wind at . . . (place of observation)?	Here is the information requested . . .			
QUC	What is the number (or other indication) of the last message you received from me [or from (call sign)]?	The number (or other indication) of the last message I received from you [or from . . . (call sign)] is . . .			
QUD	Have you received the urgency signal sent by . . . (call sign of mobile station) at . . . hours?	I have received the urgency signal sent by . . . (call sign of mobile station) at . . . hours.			
QUF	Have you received the distress signal sent by . . . (call sign of mobile station)?	I have received the distress signal sent by . . . (call sign of mobile station) at . . . hours.			
QUG	Will you be forced to alight (or land)?	I am forced to alight (or land) immediately.			
		I shall be forced to alight (or land) at . . . (position or place).			
QUH	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is . . . (units).			

CENSUS OF AMATEUR RADIO LICENSES* in the U. S. A.

by classes, within states and call areas

Call Area	State	Novice	Tech-nician	Con- ditional	General	Advanced	Extra	Club	Military	State totals	YL's (included in state totals)
#1	Conn.	282	720	768	1,765	867	218	75	7	4,702	141
	Maine	77	104	561	388	284	76	14	6	1,510	66
	Mass.	549	2,989	605	4,202	1,908	440	118	23	10,834	404
	N.H.	83	398	194	586	272	61	24	3	1,621	76
	R.I.	44	467	119	596	229	50	21	5	1,531	60
	Vermont	43	75	230	164	114	26	11	1	664	35
		<u>1,078</u>	<u>4,753</u>	<u>2,477</u>	<u>7,701</u>	<u>3,674</u>	<u>871</u>	<u>263</u>	<u>45</u>	<u>20,862</u>	<u>782</u>
#2	N.J.	743	3,276	396	5,135	2,474	573	162	11	12,770	302
	N.Y.	1,740	5,772	856	9,570	4,174	955	346	43	23,456	696
		<u>2,483</u>	<u>9,048</u>	<u>1,252</u>	<u>14,705</u>	<u>6,648</u>	<u>1,528</u>	<u>508</u>	<u>54</u>	<u>36,226</u>	<u>998</u>
#3	Del.	58	104	37	286	117	24	8	2	636	16
	D.C.	34	75	32	231	145	42	21	6	586	9
	Md.	362	843	291	2,207	1,190	310	64	27	5,294	133
	Pa.	1,093	3,700	833	6,097	2,462	567	214	32	14,998	444
		<u>1,547</u>	<u>4,722</u>	<u>1,193</u>	<u>8,821</u>	<u>3,914</u>	<u>943</u>	<u>307</u>	<u>67</u>	<u>21,514</u>	<u>602</u>
#4	Alabama	300	606	756	1,254	491	111	23	14	3,555	132
	Florida	555	1,675	1,845	3,792	2,293	443	103	24	10,730	395
	Georgia	262	541	849	1,406	663	145	44	16	3,926	107
	Ky.	210	428	494	767	414	83	31	9	2,436	71
	N.C.	292	568	955	1,432	701	131	43	14	4,136	135
	S.C.	120	144	941	466	254	58	16	16	2,015	58
	Tenn.	337	1,016	621	1,393	738	157	42	7	4,311	125
	Va.	351	809	843	2,129	1,165	298	54	35	5,684	113
		<u>2,427</u>	<u>5,787</u>	<u>7,304</u>	<u>12,639</u>	<u>6,719</u>	<u>1,426</u>	<u>356</u>	<u>135</u>	<u>36,793</u>	<u>1,136</u>
#5	Ark.	186	270	399	519	313	61	25	9	1,782	84
	La.	287	367	669	1,114	549	113	36	16	3,151	88
	Miss.	105	130	467	495	257	39	7	3	1,503	33
	N.M.	116	147	575	375	339	91	18	13	1,674	75
	Okla.	286	636	507	1,046	649	113	37	40	3,314	143
	Texas	979	2,427	3,058	4,918	2,788	546	147	60	14,923	653
		<u>1,959</u>	<u>3,977</u>	<u>5,675</u>	<u>8,467</u>	<u>4,895</u>	<u>963</u>	<u>270</u>	<u>141</u>	<u>26,347</u>	<u>1,076</u>
#6	Calif.	2,743	7,945	3,684	14,718	8,699	1,575	492	110	39,966	1,338
#7	Arizona	285	641	602	1,071	692	121	36	26	3,474	158
	Idaho	94	46	468	164	187	29	10	1	999	54
	Montano	125	49	618	150	148	48	14	5	1,157	59
	Nevada	42	90	427	161	149	27	14	8	918	50
	Oregon	436	536	838	1,480	857	141	52	16	4,356	207
	Utah	215	224	177	485	234	45	17	12	1,409	44
	Wash.	621	1,003	1,277	2,531	1,353	261	72	22	7,140	342
	Wyoming	61	32	235	94	67	18	12	3	522	24
		<u>1,879</u>	<u>2,621</u>	<u>4,642</u>	<u>6,136</u>	<u>3,687</u>	<u>690</u>	<u>227</u>	<u>93</u>	<u>19,975</u>	<u>938</u>
#8	Mich.	986	2,735	1,017	4,077	1,747	275	128	16	10,981	369
	Ohio	1,189	5,194	648	5,823	2,447	399	202	18	15,920	553
	W.Va.	204	356	180	686	239	60	18	4	1,747	42
		<u>2,379</u>	<u>8,285</u>	<u>1,845</u>	<u>10,586</u>	<u>4,433</u>	<u>734</u>	<u>348</u>	<u>38</u>	<u>28,648</u>	<u>964</u>
#9	Ill.	1,245	3,209	1,716	5,667	2,544	430	212	21	15,044	491
	Indiana	580	1,930	546	2,315	996	188	112	6	6,673	266
	Wisc.	401	740	898	1,600	867	155	70	16	4,747	110
		<u>2,226</u>	<u>5,879</u>	<u>3,160</u>	<u>9,582</u>	<u>4,407</u>	<u>773</u>	<u>394</u>	<u>43</u>	<u>26,464</u>	<u>867</u>
#10	Colo.	329	452	659	1,211	693	133	44	15	3,536	150
	Iowa	432	544	575	1,627	778	136	64	10	4,166	149
	Kansas	356	355	948	1,093	545	128	37	22	3,484	159
	Minn.	469	509	842	1,731	873	190	61	8	4,683	130
	Mo.	521	1,012	870	2,018	1,029	207	75	9	5,741	203
	Nebr.	209	276	473	700	374	51	32	5	2,120	88
	N.D.	40	10	411	60	96	21	8	6	652	27
	S.D.	80	45	250	235	144	26	12	3	795	45
		<u>2,436</u>	<u>3,203</u>	<u>5,028</u>	<u>8,675</u>	<u>4,532</u>	<u>892</u>	<u>333</u>	<u>78</u>	<u>25,177</u>	<u>951</u>
KH6	Hawaii	191	126	294	613	337	54	30	43	1,688	47
KL7	Alaska	234	130	319	453	204	48	12	76	1,476	102
Grand total, 50 states and D.C. only		<u>21,582</u>	<u>56,476</u>	<u>36,873</u>	<u>103,096</u>	<u>52,149</u>	<u>10,497</u>	<u>3,540</u>	<u>923</u>	<u>285,136</u>	<u>9,801</u>

* From the Spring 1970 Radio Amateur Callbook Magazine.

NEW YORK, N.Y.

The table below shows the great circle bearing in degrees from the point indicated above to countries throughout the world having licensed radio amateurs. Where cities are shown the bearing to the nearest degree is given. These bearings were compiled from information supplied by the U. S. Coast and Geodetic Survey.

PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING
AZC	BUTSWANA, MAPEKING	103	KS4	SWAN IS.	203	VQ8	CHAGOS IS.	50
AC3	SIKKIM	17	KS6	U S SAMOA	264		MAURITIUS & RODRIGUEZ IS.	78
AC4	TIBET, LHASA	14	KV4	VIRGIN IS.	151	VQ9	SEYCHELLES IS.	65
AC5	BHUTAN	14	KW6	WAKE IS.	304	VR1	GILBERT, ELLICE & OCEAN IS.	287
AP	PAKISTAN, KARACHI	36	KX6	MARSHALL IS.	294	VR2	FIJI IS.	267
BV	TAIWAN, TAIPEI	345	KZ5	CANAL ZONE	190	VR3	FANNING & LINE IS.	270
BY	CHINA, CHUNGKING	359	LA	NORWAY, OSLO	39	VR4	SOLOMON IS.	290
	PEKING	352		SVALBARD IS.	15	VR5	TONGA IS.	261
	SHANGHAI	346		JAN MAYEN IS.	25	VR6	PITCAIRN IS.	229
CE	CHILE, SANTIAGO	177	LU	ARGENTINA, BUENOS AIRES	167	V55	BRUNEI	348
CEWA	EASTER IS.	212	LX	LUXEMBOURG	51	V56	HONG KONG	351
CEWZ	JUAN FERNANDEZ IS.	184	LZ	BULGARIA, SOFIA	52	VU	INDIA, BOMBAY	34
CM,CO	CUBA, HAVANA	204	M1	SAN MARINO	55		CALCUTTA	18
CN	MOROCCO, CASABLANCA	75	MP4	MUSCAT & OMAN, MASQAT	48		NEW DELHI	26
CP	BOLIVIA, LA PAZ	173	OA	PERU, LIMA	184	VU4	LACCADIVE IS.	38
CR3	PORTUGUESE GUINEA	101	OD5	LEBANON, BEIRUT	52	VU5	ANDAMAN & NICOBAR IS.	16
CR4	CAPE VERDE IS.	105	OE	AUSTRIA, VIENNA	49	XF, XF	MEXICO, MEXICO CITY	233
CR6	ANGOLA, NOVA LISBOA	100	OH	FINLAND, HELSINKI	35	X14	REVILLAGIGEDO IS.	247
CR7	MOZAMBIQUE, LOURENCO MARQUES	101	OH8	ALAND IS.	36	XW8	LAOS	4
	MOZAMBIQUE	85	OK,OL	CZECHOSLOVAKIA, PRAGUE	48	XZ	BURMA, RANGOON	11
CR8	GOA	35	ON	BELGIUM, BRUSSELS	51	YA	AFGHANISTAN, KANDAHAR	34
CR8	TIMOR IS.	327	OX	GREENLAND, GOOTHAAB	22	YI	IRAQ, BAGHDAD	47
CR9	MACAO	352	OY	FAEROES IS.	38	YJ	NEW HEBRIDES, VILLA	276
CT1	PORTUGAL, LISBON	70	OZ	DENMARK, COPENHAGEN	43	YK	SYRIA	50
CT2	AZORES IS.	78	PA,PE,PI	NETHERLANDS, AMSTERDAM	49	YN	NICARAGUA, MANAGUA	204
CT3	MADEIRA IS.	81	PJ	NETHERLANDS ANTILLES	170	YO	RUMANIA, BUCHAREST	49
CX	URUGUAY, MONTEVIDEO	165	PJ2M	SINT MAARTEN	154	Y5	EL SALVADOR, SAN SALVADOR	210
DC,DJ,DK	WEST GERMAN FEDERAL REP, BONN	50	PX1	ANDORRA	62	YU	YUGOSLAVIA, BELGRADE	51
DM	E. GERMAN DEMOCRATIC REP, BERLIN	46	PY	BRAZIL, BRASILIA	151	YV	VENEZUELA, CARACAS	166
DU	PHILIPPINES, MANILA	343		RIO DE JANEIRO	150	ZA	ALBANIA, TIRANA	55
EA	SPAIN, MADRID	66		NATAL	132	ZB2	GIBRALTAR	71
EA6	BALLEARIC IS.	64	PY8	TRINIDADE & MARTIN VAZ IS.	136	ZC4	CYPRUS	53
EA8	CANARY IS.	86	PZ	SURINAM	149	ZD3	GAMBIA	102
EA9	SPANISH SAHARA	72	SK,SL,SM	SWEDEN, STOCKHOLM	38	ZD4	SWAZILAND	102
EA8	RIO MUNI	91	SP	POLAND, WARSAW	44	ZD7	SAINT HELENA	116
EI	IRELAND, DUBLIN	50	ST	SUDAN, KHARTOUM	67	ZD8	ASCENSION IS.	116
EL,SL	LIBERIA, MONROVIA	103	SU	EGYPT, CAIRO	58	ZD9	TRISTAN DA CUNHA & GOUGH IS.	135
EP	IRAN, TEHRAN	42	SV	GREECE, ATHENS	56	ZE	SOUTHERN RHODESIA, SALISBURY	94
ET3	ETHIOPIA, ADDIS ABABA	68	SV5	DODICANESE IS.	54	ZK1	CHUK IS.	252
	ASMAKA	63	TA,TC	TURKEY, ANKARA	49	ZK2	NIGR IS.	258
F	FRANCE, PARIS	54	TF	ICELAND, REYKJAVIK	34	ZL1	NEW ZEALAND, AUCKLAND	251
F68	AMSTERDAM AND ST. PAUL IS.	92	TG	GUATEMALA, GUATEMALA CITY	214	ZL2	WELLINGTON	245
	KERGUELEN IS.	121	TI	COSTA RICA	199	ZL3	CHRISTCHURCH	243
FC	CORSICA	58	TJ	CAMEROON, YAOUNDE	90	ZL4	DUBLIN	241
FG7	GUADELOUPE	152	TL8	CENTRAL AFRICAN REP, BANGUI	85	ZP	PARAGUAY, ASUNCION	164
FH8	CUMORO IS.	81	TN8	REPUBLIC OF CONGO, BRAZZAVILLE	82	Z5	SOUTH AFRICA, CAPE TOWN	116
FK8	NEW CALEDONIA, NOUMEA	271	TR8	GABON, LIBREVILLE	94		DURBAN	106
FL8	FRENCH SOMALILAND, DJIBOUTI	63	TR8	CHAD, FT. LAMY	81		JOHANNESBURG	104
FM7	MARTINIQUE	153	TU2	IVORY COAST, ABIDJAN	99	Z52	PRINCE EDWARD & MARION IS.	121
F08	FRENCH POLYNESIA, TAHITI	248	TZ	MALI REPUBLIC, BAMAKO	96	Z53	SOUTH-WEST AFRICA, WINDHOK	107
	CLIPPERTON IS.	236	UA1	SUUVET UNION, MOSCOW	34	SA	MONALO	57
FP8	ST. PIERRE & MIGUELON IS.	95	UA9,4	ASIATIC RUSSIAN S.F.-S.R.	359	3V8	TUNISIA, TUNIS	63
FR7	REUNION IS.	81	UA5	UKRAINIAN S.S.R.	43	3W8	VIENTIANE, SAIGON	359
FS7	SAINT MARTIN IS.	154	UC2	WHITE RUSSIAN S.S.R.	39	451	CEYLON, COLOMBO	32
F08	NEW HEBRIDES, VILA	276	UD6	AZERBAIDZHAN S.S.R.	42	4W1	YEMEN	60
FWE	WALLIS & FUTUNA IS.	268	UF6	GEORGIAN S.S.R.	41	4X4,4Z4	ISRAEL	54
FYZ	FRENCH GUIANA, CAYENNE	146	UG6	ARMENIAN S.S.R.	43	5A	LIBYA, TRIPOLI	65
G	ENGLAND, LONDON	51	UH8	TURKISH S.S.R.	33	5B3	TANZANIA, DAR ES SALAAM	80
GC	CHANNEL IS.	53	UI8	UZBEK S.S.R.	29	5N2	NIGERIA, LAGOS	93
GD	ISLE OF MAN	48	UJ8	TAJIK S.S.R.	28	5R8	MALAGASY REPUBLIC, TANANARIVE	84
GI	NORTHERN IRELAND, BELFAST	49	UL7	KAZAKH S.S.R.	22	5S5	MAURITANIA, NOUAKCHOTT	97
GM	SCOTLAND, GLASGOW	46	UM8	KIRGHIZ S.S.R.	21	5U7	NIGER, NIAMEY	89
GW	WALES	50	UN1	KARELO-FINNISH S.S.R.	27	5V	TUGO	93
HA,HG	HUNGARY, BUDAPEST	49	UD5	MOLDAVIAN S.S.R.	46	5W1	WESTERN SAMOA	265
HB	SWITZERLAND, BERN	54	UP	LITHUANIAN S.S.R.	40	5X5	UGANDA	83
H88	LIECHTENSTEIN	54	UQ	LATVIAN S.S.R.	38	5Z4	KENYA, NAIROBI	77
HC	ECUADOR, QUITO	187	UR	ESTONIAN S.S.R.	36	60	SOMALI REPUBLIC, MOGADISHU	68
H08	GALAPAGOS IS.	205	VE1	CANADA, HALIFAX	61	6W8	SENEGAL, DAKAR	101
HH	HAITI, PORT-AU-PRINCE	175	VE2	MONTREAL	4	6Y5	JAMAICA	187
HI	DOMINICAN REP, SANTO DOMINGO	170	VE3	TORONTO	305	7G1	REPUBLIC OF GUINEA, CONAKRY	103
HK	COLUMBIA, BOGOTA	180	VE4	WINNIPEG	307	7J	SOUTH YEMEN, ADEN	61
HK0	SAN ANDRES & PROVIDENCIA IS.	195	VE5	SASKATOON	308	7PH	LESOTHO	107
HM,HJ9	KORIA, SEDUL	343	VE6	EDMONTON	311	7Q7	MALAWI, ZOMBA	87
HP	PANAMA	190	VE7	VANCOUVER	302	7X	ALGERIA, ALGIERS	67
HR	HONDURAS, TEGUCIGALPA	207	VF8	FORT NELSON	318	7Z,HZ	SAUDI ARABIA, MECCA	55
HS	THAILAND, BANGKOK	6	VK1	AUSTRALIA, CANBERRA	265	8F1,2,3	JAVA, BATAVIA	358
HV	VATICAN CITY	57	VK2	SYDNEY	266	8F4	SUMATRA	5
I	ITALY, ROME	57	VK3	MELBOURNE	262	8F5	BURNEI	348
	TRIESTE	53	VK4	BRISBANE	274	8F6	CELEBES IS.	336
IS	SARDINIA	60	VK5	ADELAIDE	272	8P6	BARBADOS	149
IT	SICILY	61	VK6	PERTH	315	8R	GUYANA, GEORGETOWN	152
JA,Jm	JAPAN, TOKYO	333	VK7	TASMANIA, HOBART	252	9C1	GHANA, ACCRA	96
JT1	MONGOLIA, ULAN BATOR	359	VK8	DARWIN	315	9H1	MALTA	61
JY	JORDAN	54	VK9	NORFOLK IS.	263	9J2,9J3	ZAMBIA, LUSAKA	94
K86	WEST IRAN	313		NEW GUINEA, PAPUA, PORT MCVESBY	299	9K2	KUWAIT	48
K04	BAKER IS.	278	VK0	HEARD IS.	130	9L1	SIERRA LEONE, FREETOWN	103
K06	NAVASSA IS.	183		MAGGUAIE IS.	230	9M2	FEDERATION OF MALAYSIA	7
K06	CAROLINE IS.	312	V01	NEWFOUNDLAND, ST JOHNS	60	9M6	SABAH, NORTH BURNIE	345
KG4	GUANTANAMO BAY, CUBA	181	V02	LABRADOR, HOPEDALE	27	9M8	SARAWAK	345
KG6	MARIANAS IS., GUAM	318	VP1	BRITISH HONDURAS	212	9N1	NEPAL, KATMANDU	19
KG61	VOLCANO IS.	327	VP2	ANTIGUA	151	9Q5	REP. OF THE CONGO, KINSHASA	94
KG65	SAIPAN IS.	318	VP5	TURKS & CAICOS IS.	172		LURUMBASHI	91
KH6	HAWAII, HONOLULU	283	VP7	BAHAMA IS.	186	9U5	BURUNDI	83
KL7	ALASKA, ANCHORAGE	321	VP8	FALKLAND IS.	171	9V1	SINGAPORE	3
	FAIRBANKS	327		SOUTH GEORGIA IS.	159	9X5	RWANDA	83
KM6	MIDWAY IS.	301	VP9	BERMUOA IS.	134	9Y4	TRINIDAD & TOBAGO IS.	155
KP4	PUERTO RICO	160	VQ1	ZANZIBAR	79			
KR6,8	RYUKYU IS., OKINAWA	340						

WORLD WIDE QSL BUREAUS

AP	Pakistan Amateur Radio Society, QSL Bureau, P O Box 65, Lahore, West Pakistan, Asia	KP4	Alicia G Rodriguez, KP4CL, P O Box 1061, San Juan, Puerto Rico	VP7	Bahamas Amateur Radio Society, P O Box 6004, Nassau, Bahamas Is.
CE	Radio Club de Chile, P O Box 13630, Correo 15, Santiago, Chile, South America	KP4	Novice cards only - the NQOB District QSL Manager, KP4QA, Jorge Blanch, Box 2573, San Juan, Puerto Rico	VP8	Falkland Is. & South Georgia - direct or the CX QSL Bureau, P O Box 37, Montevideo, Uruguay, South America
CM-CO	Federacion de Radioaficionados de Cuba, P O Box 6596, Havana, Cuba	KR6	QSL Bureau, OARC, APO San Francisco 96331, USA		All other VPB bases via - R5GB, England
CN	AAEM, P O Box 299, Rabat, Morocco, Africa	KR8	QSL Bureau, OARC, P O Box 37, Kadena, Okinawa	VP9	Radio Society of Bermuda, P O Box 275, Hamilton, Bermuda
CN	U S Navy in Morocco, H L "Tommy" Hall, General Delly, U S Naval Training Cnd, FPO New York 09544, USA	KS4	Swan Island, West Indies, via Tampa, Florida, USA	VQ1	The RSEA QSL Bureau, P O Box 2387, Dar-Es-Salaam, Tanzania, East Africa
CN9	Amateur Radio Club Zona Norte, P O Box 124, Tetuan, Morocco, Africa, or via URE or AAEM	KV4	Graciano Belardo, KV4CF, P O Box 572, Christiansted, St. Croix 00820, Virgin Is, West Indies	VQ8	Paul Caboche, VQ8AD, P O Box 467, Port Louis, Mauritius, Africa
CP	Radio Club Boliviano, P O Box 2111, La Paz, Bolivia, South America	KW6	USCG Loran Station, KW6CGA, P O Box 7, Wake Island, Central Pacific Ocean	VR2	The QSL Bureau, P O Box 184, Suva, Fiji Islands
CP5	QSL Bureau, P O Box 208, Cochabamba, Bolivia, S.A.	KX6	Kwayalein Amateur Radio Club, KX6BU, P O Box 444, APO San Francisco 96555, USA	V55	MARTS, P O Box 777, Singapore, Asia
CP6	QSL Bureau, P O Box 393, Santa Cruz, Bolivia, S.A.	KZ5	Eniwetok Amateur Radio Club, Air Force Western Test Range, APO San Francisco 96333 USA	V56	Hong Kong Amateur Radio Transmitting Society, P O Box 541, Hong Kong, Asia
CR4	Radio Club de Cabo Verde, CR4AA, Praia, Sao Tiago, Cape Verde Islands, Africa	LA	Via KZ5GS, Gloria M Spears, P O Box 407, Balboa, Canal Zone, Central America	V59M	RGSB, 28 Little Russell St, London, WC 1, England
CR6	LARA, P O Box 484, Luanda, Angola, Africa	LU	Norwegian Radio Relay Liga, P O Box 21, Refstad, Oslo 5, Norway, Europe	VU	Amateur Radio Society of India, P O Box 534, New Delhi 1, India, Asia
CR7	LREM, Liga dos Radio Emissores de Mocambique, P O Box 612, Lourenco Marques, Mozambique, Africa	LX	RCA, Radio Club Argentino, Carlos Caivo 1424, Buenos Aires, Argentina, South America	W1-K1	Foreign stations only, via Hampden County A R Assn, Box 216, Forest Park Stn, Springfield, Mass 01108
CR9	Hong Kong Amateur Radio Transmitting Society, P O Box 541, Hong Kong, Asia	LZ	Robert Schott, LX1DC, 35 Rue Batty Weber, Esch s Alzette, Luxembourg, Europe	W2-K2	Foreign stations only, via North Jersey DX Assn, P O Box 505, Ridgewood, New Jersey 07451
CT	REP, P O Box 2483, Lisbon, Portugal, Europe	M1	Central QSL Bureau, Box 830, Sofia, Bulgaria, Europe	W3-K3	Foreign stations only, via W3KT, Jesse Bieberman, RFD 1, Valley Hill Rd, Malvern, Pa. 19355
CX	Radio Club of Uruguay, P O Box 37, Montevideo, Uruguay, South America	OE	Geom Mario Graziani, M1B, via Della Tana 226, Republic of San Marino, Europe	W4-K4	Foreign stations only, via K4HFX, H L Parrish Jr, RFD 5, Box 804, Hickory, N.C. 28601
DC-DJ-DK	DARC QSL Bureau, P O Box 86 03 20, DB Munich 86, West German Federal Republic, Europe	OH	ICN Cable, MP46BW, Box 425, Awali, Bahrain Is, Asia	WA4-WB4-WN4	Foreign stations only, via W4LR, J R Baker, 1402 Orange St, Melbourne Beach, Florida 32951
DL5	Via C J Thomas, GW3PSM, 59 Maendy Way, West Pontnewydd, CWMBRAN, Monmouthshire NP4 1HW, Wales, Europe	OK-OL	RCP, Radio Club of Peru, Box 538, Lima, Peru, S.A.	W5-K5	Foreign stations only, via K5QVH, Hurley O Saxon, Box 9915, El Paso, Texas 79989
DL5	French, via R E F, P O Box 70, Paris 12, France	ON	RAI, QSL Bureau, Box 1217, Beirut, Lebanon, Asia	W6-K6	Foreign stations only, via San Diego DX Club, P O Box 6029, San Diego, California 92106
DL4-5	Via DL4-5 QSL Bureau, c/o MARS Radio Station, HQS 93rd Signal Bn, APO New York 09175, USA	OX-DZ	OE, VSV QSL Bureau, P O Box 999, Vienna 1/9, Austria, Europe	W7-K7	Foreign stations only, via W7AR, J R Baker, Box 555, Portland, Oregon 97207
DM	DM QSL Bureau, P O Box 30, Berlin 55, East German Democratic Republic, Europe	OX4	SRAL QSL Bureau, P O Box 10306, Helsinki 10, Finland, Europe	W8-K8	Foreign stations only, via W8RCXY, Paul F Hubbard, 921 Market St, Zanesville, Ohio 43701
DU	PARA QSL Bureau, P O Box 4083, Manila, Philippines	OX5	Central Radio Club, P O Box 69, Praha 1, Czechoslovakia	W9-K9	Foreign stations only, via W9MSG, Ray P Birren, P O Box 519, Elmhurst, Illinois 60126
EA	URE, Union de Radioaficionados Espanoles, P O Box 220, Madrid, Spain, Europe	OY	UBA, P O Box 634, Brussels 1, Belgium, Europe	WB-K0	Foreign stations only, via Des Moines Radio Amateur Assn, P O Box 88, Des Moines, Iowa 50301
EI	IRTS QSL Bureau, 24 Wicklow St, Dublin 20124, Ireland	PA-PE-PI	Or UBRC, P O Box 224, Brussels 1, Belgium	XW8	Humphanh Saingnasilh, XW8AL, Statistics Dept, P O Box 46, Vientiane, Laos, Asia
EL	Cards for EL1 & 2 only - G Marcus Kelly, c/o Liberian Govt. Radio Stn, Monrovia, Liberia, Africa	PJ	EDR QSL Bureau, Ingstrup, 9480 Lokken, Denmark, Europe	XZ	BARTS, P O Box 800, Rangoon, Burma, Asia
EP	All others - Via QSL Bureau, P O Box 1477, Monrovia, Liberia, Africa	PJ	OX4FA-OX4HZ via MARS Director, XP1AB, 2004 Comm Spd, APO New York 09121 USA	YA	CDRC, P O Box 275, Kabul, Afghanistan, Asia
ET3	Amateur Radio Society of Iran, c/o Box 1000 ARMISH-MAAG, APO New York 09205	PY1	OX5AA-OX5EZ via MARS Director, XP1AA, 1983 Comm Spd, APO New York 09023 USA	YK	QSL Bureau, P O Box 35, Damascus, Syria, Asia
ET3	Telecommunications Amateur Radio Club, P O Box 1047, Addis Ababa, Ethiopia, Africa	PY2	QSL Bureau, QY3B, Solus Rubeksen, U Svartfossi, DK-3800, Torshavn, Faeroes Island, Europe	YN	Via Mike Murciano, YN1MO/W4, P O Box 902, Coral Gables, Florida 33134 USA
F	Cards for U S Army Personnel may be sent via Kagnev Amateur Radio Club, ET3USA, APO New York 09843	PY3	Members & Non-members - VERON, IARU-QSL Bureau, P O Box 400, Rotterdam, Netherlands, Europe	Y0	The Central Radio Club, P O Box 1395, Bucuresti 5, Romania
FBB	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY4	Or VRZA, P O Box 190, Groningen, Netherlands	Y5	Oscar R Orellana, Y510, P O Box 329, San Salvador, El Salvador, Central America
FG7	QSL Manager, 5RBBC, P O Box 587, Tananarive, Madagascar, Africa	PY5	VERONA QSL Bureau, P O Box 383, Willemstad, Curacao, Netherlands Antilles, S.A.	YU	Members only - CRAS, P O Box 517, San Salvador, El Salvador, Central America
FG7	Radio Club Guadeloupe, P O Box 387, Pointe-A-Pitre, Guadeloupe, West Indies	PY6	Cards for Aruba - Aruba Amateur Radio Club, Box 273, San Nicolas, Aruba, Netherlands Antilles, S.A.	YV	SRJ, P O Box 48, Belgrade, Yugoslavia, Europe
FH8	QSL Manager, 5RBBC, P O Box 587, Tananarive, Madagascar, Africa	PY7	LABRE, Box 2353, Rio de Janeiro, Brazil, S.A.	YV	RCV, Radio Club Venezolano, P O Box 2285, Caracas, Venezuela, South America
FK8	QSL Bureau, P O Box 637, Noumea, New Caledonia	PY8	LABRE, Box 22, Sao Paulo, SP, Brazil, S.A.	ZB2	Via Association of Radio Amateurs of Venezuela, P O Box 3636, Caracas, Venezuela, South America
FL8	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY9	LABRE, Box 2180, Porto Alegre, RS, Brazil, S.A.	ZC4	Via RAF Amateur Radio Club, Royal Air Force, Gibraltar, Europe
FM7	REF QSL Service, P O Box 70, Paris 12, France, Europe	PY9	LABRE, R. Curitiba 656, Conjunta 25, Belo Horizonte, MG, Brazil	ZD4	Cyprus Amateur Radio Society, P O Box 216, Famagusta, Cyprus, or via G2MI
F08	Radio Club Oceanien, P O Box 374, Papeete, Tahiti	PY9	LABRE, Box 1459, Curitiba, PR, Brazil, S.A.	ZD7	Via P O Jamestown, St. Helena, Africa
FP8	Radio Club S P M, P O Box 347, St. Pierre & Miquelon Is. or R E F QSL Bureau, P O Box 70, Paris 12, France	PY9	LABRE, Av Cons, Almeida Costa 25, Salvador, BA, Brazil, S.A.	ZD8	Ascension Amateur Radio League, ZD8AR, P O Box 4187, Patrick AFB, Florida, USA
FY7	R E F QSL Service, P O Box 70, Paris 12, France	PY9	LABRE, Box 1043, Recife, PE, Brazil, S.A.	ZD9	SARL, P O Box 3037, Capetown, South Africa
G	RGSB, Radio Society of Great Britain, c/o Arthur Milne, G2MI, 29 Kechill Gdns, Hayes, Bromley, Kent, England	PY9	Fernando de Noronha, via QSL Bureau, P O Box 1043, Recife, Pernambuco, Brazil, S.A.	ZE	RSR QSL Manager, P O Box 2377, Salisbury, Rhodesia
GC	QSL Bureau, 87 Dunnington Rd, Wootton Bassett, Swindon, Wilts, England, Europe	PY9	LABRE, P O Box 71, Belem, Para, Brazil, S.A.	ZF1	Cards may be sent direct
GD	RSGB	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	ZK1	QSL Bureau, Radio Station Rarotonga, Rarotonga, Cook Is.
GI	R R Parsons, G13HXV, 45 Ennville Av, Finaghy, Belfast 10, Northern Ireland, Europe	PY9	Direct or via LABRE, P O Box 2353, Rio de Janeiro, GB, Brazil, S.A.	ZL	NZART, P O Box 489, Wellington, New Zealand
GM	RSGB	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	ZP	Radio Club Paraguayo, Casilla de Correo 512, Asuncion, Paraguay, South America
GW	RSGB	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	ZS	For members only - SARL, P O Box 3037, Capetown, Case Province, South Africa
HA-HG	HSRL, P O Box 214, Budapest 5, Hungary	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	3A2	Pierre Andenhat, 3A2CN, 41 Blvd. Jardin Exotique, Monaco - or Director Generale des Telecomm, 16 Blvd. de Suisse, Monte Carlo, Monaco, Europe
HB	USKA, HB9NL, Sonnenrain 188, 6233 Bueren, Lucerne, Switzerland, Europe	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	4S7	Radio Society of Ceylon, QSL Manager, P O Box 907, Colombo, Ceylon, Asia
HBB	USKA, HB9NL, Sonnenrain 188, 6233 Bueren, Lucerne, Switzerland, Europe	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	4W1-4W3	Cards for HB9 calls in Yemen, via USKA, HB9NL, Sonnenrain 188, 6233 Bueren, LU, Switzerland
HC	Guayaquil Radio Club, P O Box 5757, Guayaquil, Ecuador, South America	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	4X4-4Z4	IARC, P O Box 4099, Tel Aviv, Israel
HC1	Asociacion Radio Ecuatoriana, P O Box 289, Quito, Ecuador, South America	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5A	QSL Bureau, Box 372, Tripoli, Libya, North Africa
HC5	Cuenca Radio Club, P O Box 1366, Cuenca, Ecuador	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5H3	The RSEA QSL Bureau, P O Box 2387, Dar-Es-Salaam, Tanzania, East Africa
HH	Radio Club de Haiti, P O Box 943, Port-au-Prince, Haiti, West Indies	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5N2	Nigerian Amateur Radio Society, P O Box 2873, Lagos, Nigeria, Africa
HI	Radio Club Dominicano, P O Box 1157, Santo Domingo, D.N., Dominican Republic, West Indies	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5R8	QSL Bureau, P O Box 587, Tananarive, Madagascar, Africa
HK	LCRA, Liga Colombiana de Radio Aficionados, P O Box 584, Bogota, Colombia, South America	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5V	Via P O Box 33, Atakame, Togo, West Africa
HL9	All HL9 stations - address with call letters and name, c/o 8th U S Army Signal Officer, AC of SCE, APO San Francisco 96301	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5W1	H E Betham, Director of Post Office & Radio, GPO, Apia, Western Samoa
HM	KARL, Central Box 162, Seoul, Korea, Asia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5XE	The Uganda Amateur Radio Club QSL Bureau, P O Box 3433, Kampala, Uganda, East Africa
HM	North Korea - QSL Bureau, P O Box 39, Pyongyang, North Korea, Asia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	5Z4	The RSEA QSL Bureau, P O Box 30077, Nairobi, Kenya, East Africa
HP	LPRA QSL Bureau, P O Box 9A-175, Panama 9-A, Republic of Panama, Central America	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	60	Via P O Box 397, Mogadiscio, Somali Republic, Africa
HR1-HR4	QSL Club Tegucigalpa, Box 149-c, Tegucigalpa, DC, Honduras	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	6WB	REF, or P O Box 971, Dakar, Senegal, Africa
HR2	QSL Bureau, Radio Club de Honduras, P O Box 273, San Pedro Sula, Cortes, Honduras	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	6Y2	Jamaica Amateur Radio Assn, Jamaica Red Cross, 76 Arnold St, Kingston 5, Jamaica, West Indies
HR3-HR6	HR3FJ, Av 14 De Julio, 3 Calle La Ceiba, Atlantida, Honduras	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	7G1	Central Radio Club, Box 69, Praha 1, Czechoslovakia
HR5	HR5NLC, Santa Rosa de Copan, Copan, Honduras	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	7Q7	Via R MacFarlane, 7Q7RM, P O Box 472, Blantyre, Malawi
HS	STAR QSL Bureau, P O Box 2008, c/o GPO, Bangkok, Thailand, Asia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	7X	ARA QSL Service, Box 2, Alger, Algeria, Africa
HV	Domenico Petti, HV1CN, Vatican City, Europe	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	7Z	Via H23TYQ, Victor L Crawford, P O Box 1721, Aramo, Dhahran, Saudi Arabia, Asia
HZ-7Z	Via H23TYQ, Victor L Crawford, P O Box 1721, Aramo, Dhahran, Saudi Arabia, Asia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	8P6	Amateur Radio Society of Barbados, Highgate Signal Stn, Flogstaff Rd, St. Michael, Barbados, Windward Is.
I	ARI, V Scarlati 31, 20124 Milano, Italy	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	8R1	Cards may be sent direct
JA	JARL, Japanese Amateur Radio League, P O Box 377, Tokyo, Japan, Asia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9G1	Ghana Amateur Radio Society, P O Box 3773, Accra, Ghana, Africa
JT3	Radio Club JT1KAA, P O Box 639, Ulan Bator, Mongolia	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9H1	Robert F Galea, 9H1E, Casa Galea, Railway Road, Birkirkara, Malta, Europe
JX	All JX stations - address with call letters and name, c/o Jan Mayen, Norwegian Embassy, Reykjavik, Iceland	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9I-9J	Via Radio Society of Zambia, P O Box 332, Kitwe, Zambia, Africa
KA	FLARLMO, CMR Box 1414, APO San Francisco 96255	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9K1	Nasir H Khan, 9K2AN, Box 736, Kuwait, Asia
KC4AA	Office of Antarctic Programs, National Science Foundation, Washington, D.C. 20550, USA	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9L2	Radio Society of Sierra Leone, P O Box 907, Freetown, Sierra Leone, Africa
KC4US	c/o Commander, Antarctic Support Activities, FPO New York 09501	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9M2	MARTS, Box 777, Kuala Lumpur, Malaysia, Asia
OR	c/o Kenneth W Nakes, 17 Island Park Rd, Ipswich, Mass. 01938	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9M6-9M8	Via N Yathendran, 9V1JY, 363 Woodlands Rd, Singapore 23, Asia
KC6	Caroline Islands cards are sent direct	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9Q5	Or SARTS, P O Box 2728, Singapore 1, Asia
KG4	Base Amateur Radio Office, Box 12, FPO New York 09593	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9U5	UCRA QSL Bureau, P O Box 1459, Kinshasa, Dem. Rep. of Congo, Africa
KG6	Mariana Islands, except Guam, send cards direct	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9V1	UCAR QSL Bureau, P O Box 3748, Elisabethville, Rep. of the Congo
KG6	Guam only, via P O Box 445, Agaña, Guam, Mariana Is.	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9V1	N Yathendran, 9V1JY, 363 Woodlands Rd, Singapore 23, Asia
KH6	John H Oka, KH6DQ, P O Box 101, Aiea, Oahu, Hawaii 96701	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9X5	UCAR QSL Bureau, P O Box 3748, Elisabethville, Rep. of the Congo, Africa
KJ6	DET 1-1957 Comm Group AFCS, KJ6BZ, APO San Francisco 96305	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.	9Y4	Les A Thomas, 9Y4LT, P O Box 1167, Port-of-Spain, Trinidad, South America
KL7	Mary Olencorff, KL7BJD, Star Rte C, Wasilla, Alaska	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.		
KM6	KM6BI, Box 43, FPO San Francisco 96614, USA	PY9	LABRE, Box 2, Culaba, MT, Brazil, S.A.		

SAN FRANCISCO, CALIF.

The table below shows the great circle bearing in degrees from the point indicated above to countries throughout the world having licensed radio amateurs. Where cities are shown the bearing to the nearest degree is given. These bearings were compiled from information supplied by the U. S. Coast and Geodetic Survey.

PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING	PREFIX	COUNTRY	BEARING
AZC	BUTSWANA, MAFEKING	71	KS4	SWAN IS.	108	VQ8	CHAGOS IS.	337
AL3	SIKKIM	331	KS6	U S SAMOA	230		MAURITIUS & RODRIGUEZ IS.	9
AC4	TIBET, LHASA	331	KV4	VIRGIN IS.	94	VQ9	SEYCHELLES IS.	5
AC5	RHUTAN	329	KW6	WAKE IS.	275	VR1	GILBERT, ELLICE & OCEAN IS.	255
AP	PAKISTAN, KARACHI	351	KX6	MARSHALL IS.	263	VR2	FIJI IS.	237
BV	TAIWAN, TAIPEI	305	KZ5	CANAL ZONE	116	VR3	FANNING & LINE IS.	235
BY	CHINA, CHUNGKING	319	LA	NORWAY, OSLO	22	VR4	SOLOMON IS.	257
	PEKING	320		SVALBARD IS.	9	VR5	TONGA IS.	231
	SHANGHAI	310		JAN MAYEN IS.	20	VR6	PITCAIRN IS.	187
CE	CHILE, SANTIAGO	139	LU	ARGENTINA, BUENOS AIRES	132	V55	BRUNEI	296
CEWA	EASTER IS.	167	LX	LUXEMBOURG	32	V56	HONG KONG	310
CEWZ	JUAN FERNANDEZ IS.	145	LZ	BULGARIA, SOFIA	25	VU	INDIA, BOMBAY	343
CM,CD	CUBA, HAVANA	101	ML	SAN MARINO	31		CALCUTTA	129
CN	MOROCCO, CASABLANCA	49	MP4	MUSCAT & OMAN, MASQAT	8		NEW DELHI	342
CP	BOLIVIA, LA PAZ	126	UA	PERU, LIMA	130	VU4	LACCADIVE IS.	342
CR3	PORTUGUESE GUINEA	71	UD5	LIBANON, BEIRUT	20	VU5	ANDAMAN & NICOBAR IS.	320
CR4	CAPE VERDE IS.	73	UT	AUSTRIA, VIENNA	28	XE,XF	MEXICO, MEXICO CITY	126
CR6	ANGOLA, NOVA LISBOA	68	OH	FINLAND, HELSINKI	16	XI4	REVILLAGIGEDO IS.	149
CR7	MUZAMBIQUE, LOURENCO MARQUES	69	OHW	ALAND IS.	18	XWB	LAOS	316
	MUZAMBIQUE	40	OK,OL	CZECHOSLOVAKIA, PRAGUE	26	XZ	BURMA, RANGOON	319
CR8	GDA	342	ON	BELGIUM, BRUSSELS	31	YA	AFGHANISTAN, KANDAHAR	3
CR8	TIMOR IS.	275	OX	GREENLAND, GODTHAAB	34	YI	IRAQ, BAGHDAD	12
CR9	MACAO	308	OY	FAERDES IS.	28	YJ	NEW HEBRIDES, VILLA	243
CT1	PORTUGAL, LISBON	47	OZ	DENMARK, COPENHAGEN	24	YK	SYRIA	17
CT2	AZORES IS.	56	PA,PI,PI	NETHERLANDS, AMSTERDAM	30	YN	NICARAGUA, MANAGUA	119
CT3	MADEIRA IS.	56	PJ	NETHERLANDS ANTILLES	103	YO	RUMANIA, BUCHAREST	23
CX	URUGUAY, MONTEVIDEO	131	PJ2M	SINT MAARTEN	94	YS	EL SALVADOR, SAN SALVADOR	121
DC,DJ,DK	WEST GERMAN FEDERAL REP, BONN	030	PX1	ANDORRA	39	YU	YUGOSLAVIA, BELGRADE	26
DM	E. GERMAN DEMOCRATIC REP, BERLIN	026	PY	BRAZIL, BRASILIA	112	YV	VENEZUELA, CARACAS	104
DU	PHILIPPINES, MANILA	298		RIO DE JANEIRO	115	ZA	ALBANIA, TIRANA	29
EA	SPAIN, MADRID	42		NATAL	97	ZBZ	GIBRALTAR	46
EAB	BALARIIC IS.	40	PYW	TRINIDADE & MARTIN VAZ IS.	104	ZC4	CYPRUS	21
EAS	CANARY IS.	58	PZ	SURINAM	100	Z03	GAMBIA	71
E49	SPANISH SAHARA	47	SK,SI,SM	SWEDEN, STOCKHOLM	19	Z05	SWAZILAND	72
EAM	RIO MUNI	58		POLAND, WARSAW	22	Z07	SAINT HELENA	89
EI	IRELAND, DUBLIN	34	ST	SUDAN, KHARTOUM	30	Z08	ASCENSION IS.	87
EL,5L	LIBERIA, MONROVIA	72	SU	EGYPT, CAIRO	24	Z09	TRISTAN DA CUNHA & GOUGH IS.	114
EP	IRAN, TEHRAN	6	SV	GREECE, ATHENS	27	ZE	SOUTHERN RHODESIA, SALISBURY	58
ET3	ETHIOPIA, ADDIS ABABA	25	SV5	DODECANESE IS.	25	ZK1	COOK IS.	223
	ASMARA	22	TA,TL	TURKEY, ANKARA	20	ZK2	NIUE IS.	228
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<input type="checkbox"/> Exec. Desk Set	<input type="checkbox"/> Walnut Grained <input type="checkbox"/> Jet Black	<input type="checkbox"/> All letters same size <input type="checkbox"/> Large letters over small <input type="checkbox"/> Small letters over large		<input type="checkbox"/> Gold <input type="checkbox"/> Silver
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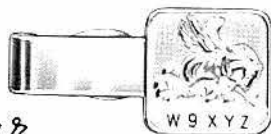


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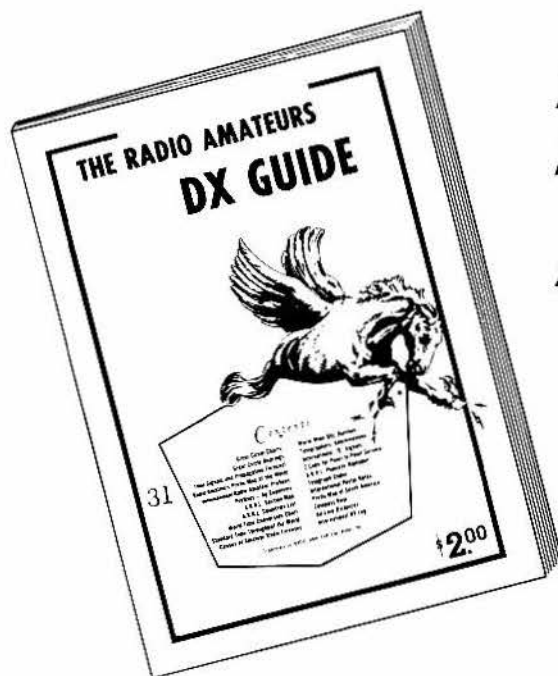
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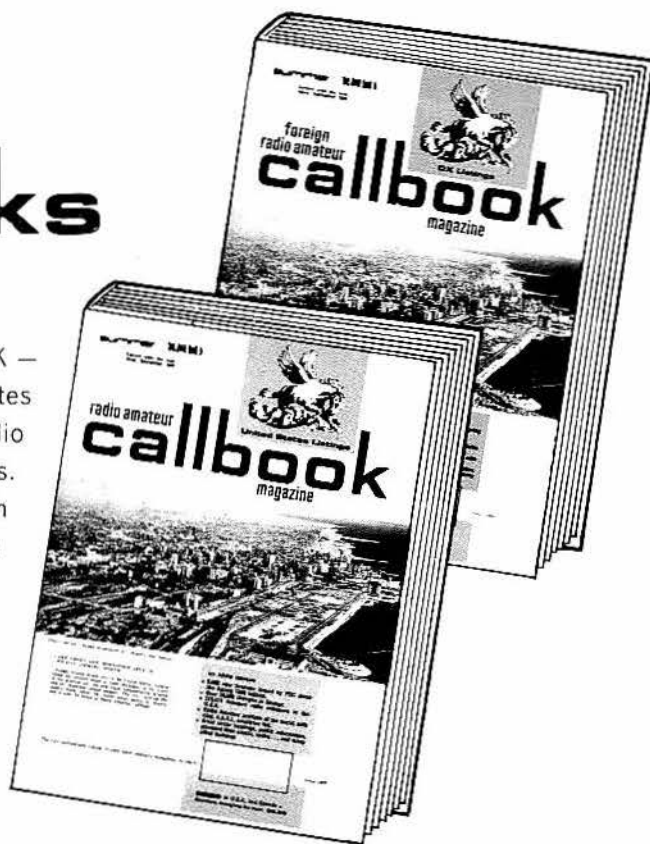
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